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ABSTRACT

This curriculum guide provides teachers with up-to-date information and skill-related applications needed by the practical nurse. The volume contains three sections and 24 instructional units: Personal Vocational Relationships (6 units), Nutrition (3 units), and Basic Nursing Principles and Applied Skills (15 units covering such topics as microbiology, bacteriology, and medical asepsis; infectious disease control and isolation techniques; patient's environment; initial patient assessment and documentation; integumentary system and patient cleanliness; musculoskeletal system and patient movement; digestive system and metabolism; circulatory system and vital signs; hematology; respiratory system and ventilation; urinary system and fluid balance; nervous system and special senses; endocrine system; and reproductive system). Each unit of instruction is presented in a format that includes eight basic components: performance objectives, suggested activities for the teacher, information sheets, assignments sheets, job sheets, transparency masters, tests, and answers to tests and assignment sheets. (YLB)

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HEALTH OCCUPATIONS EDUCATION

Practical Nursing
Volume I

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Practical Nursing
Volume I

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1981

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FOREWORD

We believe that the most effective way to improve vocational education is through a sound instructional materials delivery system. The revision of *Nursing I: A Course of Study* was necessary to provide the most up-to-date information to be used in the Practical Nursing programs. The addition of information concerning new procedures, equipment, and concepts in the health care system will insure the readiness of the graduate to provide quality patient care.

Through the combined efforts of nursing educators, state vocational staff members, and health professionals involved in the delivery of health care, *Practical Nursing: Volume I* has become a reality. We feel that the revised edition will be an invaluable instructional source to build a basic foundation of knowledge in nursing principles and applied skills.

With the use of this material, students will be better prepared to enter the nursing profession and to become skilled health team members. There will always be a need for qualified nurses dedicated to their profession and we believe that this curriculum will facilitate the students' needs and interests.

Francis T. Tuttle, State Director
State Department of Vocational
and Technical Education

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and Technical Education

PREFACE

In 1974, *Nursing I: A Course of Study*, was written to be used as a guideline in vocational practical nursing programs in Oklahoma. This curriculum was an excellent source of information to be used in teaching basic knowledge and skills needed by the practical nurse.

Each year, research and advanced technology improves health care. To keep up with the changes and to better prepare students for their expanding nursing roles, *Nursing I: A Course of Study* was revised.

The intent of the *Practical Nursing: Volume I* curriculum is to update knowledge gained in the last seven years and to provide more application in related skills. New procedures and technical equipment called for new artwork and photos to enable the student to further understand each step.

The format of this manual allows instructors to plan the program of study using the curriculum as a guide, and to supplement this manual with a variety of resources.

Through the combined efforts of a committed group of nursing educators and representatives from various health institutions, *Practical Nursing: Volume I* has become a unique combination of up-to-date information and skill-related applications needed by the nurse in this ever-expanding profession.

Jamee Reid Sloan
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A special thank-you to Denelda Golden, her students, and Stillwater Medical Center for allowing us to take the photographs seen in this curriculum.

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A very special thank-you to my editor, Terri Barnes, for her many hours of dedicated work. This publication is her first project and she tackled it with enthusiasm and persistence. Also, thanks to Lynne Murnane, Terra McCluskey, Amie Schenandoah, Susan Walker, and Sarah Mussett, publications specialist, who spent time checking copy throughout the development process.

I would like to recognize my secretary, Janet Raines, who kept the committee meetings organized, typed all of my correspondence, and kept me on schedule.

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Appreciation is expressed to Dana Cole, media specialist, and Joan Henderson for the excellent photographs shown throughout this book.

Much credit goes to the entire Graphics Division for the typing, artwork, and printing of the publication.

Last, but not least, I would like to express my sincere appreciation to Joyce Sawatzky, assistant coordinator, for her belief in me as a writer and the direction she gave in my work. Also, to Bob Patton, coordinator, a thank-you for allowing me to direct this project and for supporting my efforts.

All of the CIMC staff worked diligently to make this revision process a successful endeavor. Thanks to all of you, we did succeed.

USE OF THIS PUBLICATION

Instructional Units

Practical Nursing: Volume I includes three sections and twenty-four instructional units. A standard format was established in 1970 for the development of instructional materials for all Oklahoma vocational teachers. This format includes eight basic components which form a unit of instruction: performance objectives, suggested activities for the teacher, information sheets, assignment sheets, job sheets, transparency masters, tests, and answers to tests and assignment sheets. Depending on the specific objectives, transparency masters, assignment sheets, and job sheets may or may not be included in the unit of instruction.

All of the unit components "zero in" toward measurable and observable learning outcomes. Teachers are encouraged to supplement, personalize, localize, and motivate with these materials in order to develop a complete teaching-learning process.

Units of instruction are designed for use in more than one lesson or class period of instruction. Careful study of each unit of instruction by the teacher will help him or her determine:

A. Amount of material that can be covered in each class period
B. Skills which must be demonstrated
    1. Supplies and equipment needed
    2. Amount of practice needed
    3. Amount of class time needed for demonstrations
C. Supplementary materials, such as pamphlets and filmstrips, that must be ordered
D. Resource people who must be contacted

Performance Objectives (white pages)

Each unit of instruction is based on the performance needed for successful employment in an occupational area. Performance objectives are stated in two forms: unit objectives, stating the subject matter to be covered in a unit of instruction, and specific objectives, stating the student performance necessary to reach the unit objective.

Since the objectives of the unit provide direction for the teaching-learning process, it is important that the teacher and students have a common understanding of the intent of the objectives. Following is a list of performance terms, their meanings, and behavioral synonyms which may have been used in this material.

A. Name--The individual supplies a name for objects, events, or people

Behavioral synonyms: Label, list, letter, record, reiterate, repeat, write

B. Identify--The individual selects a named, described, or pictured object by pointing to it, touching it, picking it up, or selecting it

Behavioral synonyms: Select, mark, match, choose, judge

C. State a rule--The individual communicates a relationship or principle which could be used to solve problems or perform a task

D. Apply a rule--The individual supplies an answer to a problem by using a stated relationship or principle

Behavioral synonyms: Solve, calculate

E. Describe--The individual relates sufficient characteristics or properties of an object or event so that a second individual will be able to state what is being discussed

Behavioral synonyms: Define, discuss, interpret, recite, tell how, tell what happens when

F. Distinguish--The individual selects an object or event from two or more which are easily confused

Behavioral synonyms: Discriminate, differentiate

G. Order--The individual arranges three or more objects or events in a sequence based on a stated property

Behavioral synonyms: Arrange, sequence, list in order, classify, divide, isolate, sort

H. Construct--The individual makes a physical object, a verbal statement, or a drawing

(NOTE: Construct is used when the finished product or result is important.)

Behavioral synonyms: Draw, make, build, design, formulate, reproduce, transcribe, convert, put together, compile

I. Demonstrate--The individual performs several operations necessary to carry out a specified process

(NOTE: Demonstrate is used when it is desirable to watch the student perform a task, one of the highest levels of performance.)

Behavioral synonyms: Show your work, show procedure, perform an experiment, perform the steps, operate, remove, replace, turn off/on, (dis) assemble, (dis) connect

The objectives should be provided for students and stressed throughout the teaching-learning process. This will help answer any questions concerning performance requirements for each instructional unit. The objectives can also help determine teaching strategies and instructional methods. Prepare for each unit by deciding how each objective can best be taught.

The objective sheet may be also used as a quick pretest to determine prior knowledge of students and if further study or activities are necessary. Teachers should feel free to modify, delete, or add objectives in order to meet the needs of the students and community. When changes in objectives are made, the teacher should remember to supply the needed information, assignment and/or job sheets, and criterion test items.

Suggested Activities (pink pages)

This component is included only in teacher material. The suggested activities page assists teachers during the preparation stage of the teaching-learning process by providing suggestions for delivery and/or presentation during the instructional process. Read the suggested activities before teaching the units so supplemental materials can be obtained, audiovisual materials prepared, and outside resources contacted. Duties of the teacher will vary according to the particular unit.

The references that are listed are ones used in the development of each unit. They should be used by the teacher to supplement knowledge of the subject area or to help students with particular interest or occupational objective in the area covered.

Information Sheet (green pages)

The information sheet provides "must know" content essential for meeting the cognitive (knowledge level) objectives of the unit. The information is written in a topical outline form and is keyed to the specific objectives.

Teachers will find that the information sheet serves as an excellent guide for presenting background knowledge necessary to develop the skills specified in the unit objective. The information sheet may also be used for coordination activities and advisory committees.

Students should read the information sheet before the information is discussed in class. Space is provided in margins for students and teachers to add notes that supplement, localize, personalize, and provide motivation for each unit.

Transparency Masters (white pages in teacher material and green in student material)

Transparency masters provide information in a special way. The students may see as well as hear the material being presented, thus reinforcing the learning process. Transparencies may present new information or they may reinforce information presented in the information sheet. They are particularly effective when identification is necessary.

Transparencies should be made and placed in the notebook where they will be immediately available for use. Transparencies direct the class's attention to the topic of discussion. It is recommended that teachers stand away from the overhead projector when discussing transparency material to avoid speaking too loudly.

Assignment Sheets (brown pages)

Assignment sheets give students a chance at problem solving, self-assessment, and/or practical experience with the information. They assist students in the application of knowledges which are necessary prerequisites to skill development. These may be given to the student for completion in class or used for homework assignments. Answer sheets are provided when appropriate and can be used by the student and/or teacher for checking student progress.

Job Sheets (blue pages)

Job sheets are another important segment of a unit of instruction. The job sheets provide a list of equipment, tools, and materials needed to complete a manipulative or psychomotor skill. They describe a step-by-step procedure needed to complete each task or job. Diagrams, photographs, and illustrations are provided to assist students in achieving the skill.

Instruments in job sheets are not in order of use. This should be taught in the classroom. In this way, students will not depend entirely on job sheets for instrument setup.

A teacher should demonstrate to students the procedures outlined in each job sheet. Furthermore, the teacher needs to localize the job sheet accordingly to the equipment and supplies available in the local lab or shop situation. Job sheets also furnish potential employers with a picture of the skills being taught and the performances they might reasonably expect from a person who has had this vocational instruction.

An additional part of the job sheet was added due to the need for a consistent format to assist teachers in evaluating job skills. This part of the job sheet is a checklist that can be used in several ways. After the teacher has covered the procedure and has demonstrated the skill, the student may then take the job sheet into the clinical laboratory practice area. Students may evaluate each other's performance by marking the Performed Well or Needs Improvement boxes in pencil. When the student feels that he or she is ready to perform the procedure for the instructor, the boxes may be checked in ink by the teacher and comments may be added.

The faculty should agree upon the critical steps of the skill and the value of each step if a grade is to be given. The checklist may have to be adapted to local policies and procedures. Steps that do not apply to your particular area may be omitted or marked N/A (non-applicable).

Tests (yellow pages)

This component provides criterion-referenced evaluation of every objective listed in the unit of instruction. It is crucial to note that both paper-pencil and performance objectives must be evaluated.

The tests may be written or oral. It is recommended that the tests be divided into shorter tests covering three or four objectives at a time and given soon after those objectives have been covered. A selection of questions from the units covered may be used for final tests at the end of each term if desired. If objectives have been added, deleted, or modified, be sure to make the changes on the test.

The acceptable response on a unit test, eighty-five percent in most units, may be raised or lowered to fit the topic or students' ability levels. The percentage applies to the overall score, not to each individual question. The final unit grade should be obtained by using the "paper-pencil" score along with teacher evaluations of student demonstrations of the desired skills.

Answers to Test and Assignment Sheets (pink pages)

These components are designed to assist the teacher in evaluation of student performances.

Page Numbering

Each publication from the Curriculum and Instructional Materials Center is assigned a specific abbreviation. For example, *Practical Nursing: Volume I* has been abbreviated PN I. The units are then numbered consecutively within each section. An example of a page number is PN I - 1-A. Since CIMC publications are loose leaf, this system of page numbering was adopted so pages from different manuals would not get mixed up.

Methods of Disseminating Material

Materials may be given out a unit or page at a time to keep the material before the students always new. Some teachers ask students to furnish a three-ring binder for the units while studying a particular unit. This is more convenient for taking the materials home to study. Each unit is then placed in the larger binders upon its completion. The large binders may be purchased at cost from the CIMC. Some teachers have stored the materials by units in filing cabinets or boxes until needed for use. All the units may be given out at once if desired.

Student materials should be provided for each student for best results. They may be purchased in-state for less than a teacher can reproduce the materials, especially when the teacher's time is considered. Student materials contain everything but the test answers, answers to assignment sheets, and suggested activities. The tests are collated all together at the back of student material and should be removed and stored until needed. The students should be allowed to take their materials home at the end of the year.

Teaching Methods

It is a challenge to keep students motivated. Supplement the objectives by providing the "why," personal experiences, and current information. Prepare for each unit by deciding how each objective can best be taught. Allow students to become involved in preparing and planning.

INTRODUCTION TO NURSING
AND ASSESSMENT OF INDIVIDUAL
UNIT I

UNIT OBJECTIVE

After completion of this unit, the student should be able to identify the role of the nurse in society. The student should be able to assess nursing as a career choice. This knowledge will be evidenced by completion of assignment sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with introduction to nursing and assessment of individual to the correct definitions.
2. List general functions of a nurse.
3. Describe the roles of the practical nurse.
4. List personality characteristics desirable for a nurse.
5. List job opportunities for the practical nurse.
6. Discuss factors that affect health and appearance.
7. Describe factors that influence appropriate clothing selection.
8. Select from a list characteristics of an emotionally mature person.
9. Distinguish between "normal" and "abnormal" behavior.
10. State ways to prevent an emotional problem.
11. Arrange in order steps to improve personality.
12. Complete personal profile.
13. Increase self-awareness.
14. Complete self-assessment rating.
15. Evaluate personal habits.
16. Describe personal concept of a nurse.
17. Write personal objectives for the practical nurse program.

INTRODUCTION TO NURSING
AND ASSESSMENT OF INDIVIDUAL
UNIT I

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Give an orientation to your local program on school policies, uniform requirements, grading standards, and any other information that might be needed before beginning this unit. Use your school's handbook for a reference.

   B. Provide students with objective sheet.

   C. Provide students with information and assignment sheets.

   D. Discuss unit and specific objectives and information and assignment sheets.

   E. Have students complete Assignment Sheet #5 and discuss in class.

   F. Have students fill out Assignment Sheet #6 and discuss in class. Keep these objectives in each student's file and at the end of the program review with student to see if he or she has attained objectives.

   G. Invite a former student to speak to class on student and employment experiences.

   H. Have students complete Assignment Sheet #1 to better acquaint you with the students and to identify any problems they may have at the beginning of the program. Hold conference with individuals if needed.

      (NOTE: This information should be kept confidential. It will be valuable if a student has problems that would hinder his or her success in the program.)

   I. Make bulletin boards that show good health habits or personal grooming.

   J. Clip out help wanted ads advertising for practical nurses in a variety of positions and put up on bulletin board.

   K. Invite cosmetic representatives and hair stylists to demonstrate their products and to assist students in having neat, attractive hair styles appropriate for the health professions.

   L. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

C. Assignment sheets

  1. Assignment Sheet #1--Complete Personal Profile
  2. Assignment Sheet #2--Increase Self-Awareness
  3. Assignment Sheet #3--Complete Self-Assessment Rating
  4. Assignment Sheet #4--Evaluate Personal Habits
  5. Assignment Sheet #5--Describe Personal Concept of a Nurse
  6. Assignment Sheet #6--Write Personal Objectives for the Practical Nurse Program

D. Test

E. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study.* Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

B. Sloan, Jamee. *Health Service Careers.* Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

C. *McGraw-Hill Nursing Dictionary.* New York: McGraw-Hill Book Company, 1979.

IV. Other references:

A. *A Profile of Practical Nursing.* The National Federation of Licensed Practical Nurses, 888 Seventh Avenue, New York, New York 10019.

B. *Occupational Outlook Handbook.* U.S. Department of Labor, Bureau of Labor Statistics, Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

(NOTE: Write for the most current issue.)

C. Anderson, Peggy. *Nurse.* New York: Berkeley Publishing Corp., 1979.

V. Films:

A. *You Pack Your Own Chute.* Color, 30 min., Ramic Productions, 1972. Available from Ramic Productions, 4910 Birch, Newport Beach, California 92660.

(NOTE: This film is available on a free-loan basis to Oklahoma teachers *only* from the Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order from the address listed above.)

B. *Self-Fulfilling Prophecy.* Available from Thompson, Mitchell and Associates, 2996 Grandview Avenue Northwest, Atlanta, Georgia 30305.

C. *What You Are Is What You Were When.* Color, 90 min., 16 mm., Magnetic Video Library. Video cassette tape available from Magnetic Video Library, 23705 Industrial Park Drive, Farmington Hills, Michigan 48024.

INTRODUCTION TO NURSING AND ASSESSMENT OF INDIVIDUAL
UNIT I

INFORMATION SHEET

I. Terms and definitions

A. Nurse--One who provides services directed toward health promotion, detection and treatment of disease, and the restoring of optimal functioning in relation to individuals, families, and communities

B. Nursing--Profession that provides health care for all individuals including direct patient care, rehabilitation programs, prevention of disease, and promotion of wellness

C. Practical nurse--One who functions as a member of the health care team to plan, implement, and evaluate nursing care, especially direct patient care under the guidance of registered nurses, physicians, and dentists

(NOTE: There are many definitions of the practical nurse depending on the source. As the role of the practical nurse expands, new definitions will be given.)

D. Nursing assessment--First step in the nursing process in which pertinent data are obtained, organized, and analyzed against normal expectations

E. Nursing process--Course of action that includes patient assessment, planning, implementation, and evaluation of care

F. Personality-Each person's own set of traits, characteristics, and modes of behavior

G. Health-State of complete physical, mental, and social well-being; not merely the absence of disease or infirmity

(NOTE: This definition comes from the World Health Organization, a group concerned with world-wide health problems and their prevention.)

H. Emotions--Any specific feeling that results in mental and physical effects

Examples: Fear, hate, love, anger, grief, joy

I. Attitude--Conscious or unconscious mental views developed through cumulative experience

(NOTE: These views cause certain behaviors toward persons, groups, things, or situations.)

J. Conscience--Knowledge or feeling of right and wrong with a compulsion to do right

INFORMATION SHEET

K. Unbiased--Free from all prejudice

L. Prejudice--Preconceived judgment or opinion

M. Implementation--Carrying out a plan of action

N. Values--Measure of worth or efficiency

O. Integrity--Adhering firmly to a code of values, especially moral

P. Concept–Image of something as held in the mind

Q. Role--Expected behavior usually determined by an individual's status

R. Ethical--Conforming to an accepted professional conduct

S. Empathy--Capacity to experience another's feelings or ideas

II. General functions of a nurse

(NOTE: All of these functions are performed by a nurse in patient care. These tasks are a part of the nursing process that begins with assessment.)

A. Observe

B. Communicate

C. Apply knowledge from various sciences

D. Perform procedures

E. Work with others

F. Teach

G. Manage by planning, directing, and evaluating

III. Roles of the practical nurse

A. Functions as a member of the health care team

B. Plays a part in the planning, implementation, and evaluation of nursing care

C. Provides for the emotional and physical comfort and safety of patients

D. Observes, records, and reports changes in patient's symptoms and conditions

INFORMATION SHEET

E. Performs specialized and specific nursing functions

Examples: Administering medications and therapeutic treatments; assisting with rehabilitation and specialized care units

F. Serves as resource person in community to help others obtain needed health services

IV. Personality characteristics desirable for a nurse (Assignment Sheets #5 and #6)

A. Ethical

B. Sincere

C. Tactful

D. Determined

E. Responsible

F. Empathetic

G. Flexible

H. Poised

I. Unbiased

V. Job opportunities for the practical nurse

A. Hospitals

Examples: Pediatrics, obstetrics, critical care units, emergency rooms, operating rooms, and medical-surgical areas

B. Nursing homes

C. Extended care facilities

D. Physicians'/dentists' offices

E. Industry

F. Schools

G. Community health centers

H. Public health facilities

INFORMATION SHEET

- I. Visiting nurse services
- J. Private patients in homes
- K. Military

VI. Factors that affect health and appearance (Assignment Sheets #1 and #4)

- A. Cleanliness--Includes daily cleansing of the entire body with a lather of mild soap and water; use of effective products to eliminate body odor; clean and neatly trimmed or filed fingernails

  Examples: An effective antiperspirant or deodorant should be used to eliminate body odor. Mouthwash should be used and teeth should be brushed to prevent odors from highly seasoned food or smoking. Hair should be shampooed regularly to prevent accumulation of dirt and oils.

- B. Diet--Include the basic four food groups to obtain needed nutrients
- C. Proper elimination habits--Balanced diet, intake of adequate fluids and exercise promote good bowel habits
- D. Exercise--Builds and tones the muscles, promotes circulation and respiration exchange
- E. Sleep and rest--Refreshes all body systems
- F. Posture--Good body posture prevents strain; assists body systems in proper functioning
- G. Eye care--Prevent strain by having the best light possible; have yearly eye checks
- H. Dental care--Brush teeth daily, use floss, have regular dental checkups and do not use teeth to open objects
- I. Habits--Change habits that are harmful to your body; attempt to practice good health habits

  Examples: Overeating, smoking, drinking, or using harmful drugs

- J. Immunizations--Keep all available immunizations against diseases current

  Examples: Tetanus, polio

INFORMATION SHEET

VII. Factors that influence appropriate clothing selection (Assignment Sheet #4)

A. Clothing

(NOTE: In most health institutions uniforms are worn. Many varieties and styles are available both in white and colors. Some facilities provide uniforms or an allowance that can be used to buy uniforms.)

1. Spotlessly clean and wrinkle free

2. Free from rips, tears, missing buttons, or sagging hemlines

3. Properly fitted

(NOTE: Clothing should fit well. It should neither bag nor fit skin tight.)

B. Accessories

1. Shoes kept clean, polished, and in good repair

(NOTE: Because nurses spend a good deal of time on their feet, well-fitting duty shoes are recommended.)

2. Hosiery free from snags and runners

(NOTE: If a health worker tends to have problems with circulation, it is advisable to wear a type of support hosiery.)

3. Undergarments appropriate for outer garments

Example: Bright red and white polka dot undergarments would not be appropriate if they are seen through a white uniform

4. Jewelry kept simple, not overpowering

(NOTE: Many facilities have stated in their dress code that jewelry cannot be worn with a uniform. It looks unprofessional to wear a ring on every finger and large dangling earrings. It is also dangerous as it can carry bacteria, injure patients, and be caught on equipment.)

VIII. Characteristics of an emotionally mature person (Assignment Sheets #2 and #3)

A. Is considerate of others

B. Channels emotional drives into constructive activity

C. Accepts disappointments with courage and composure

D. Is confident of success and willing to wait and work for it

INFORMATION SHEET

E. Accepts other people as they are

F. Creates a relaxed and pleasant social atmosphere

IX. "Normal" and "abnormal" behavior

A. "Normal" behavior

1. Problems are solved by changing the environment
2. Crises are faced with minimal frustration and emotional turmoil
3. Behavior is adapted to other people and adjustments are made easily to new situations
4. Goals are pursued and life has purpose

B. "Abnormal" behavior

1. People are controlled by their environment
2. Adjustment cannot be made to other people
3. Purpose and pleasure in living is lost
4. Thought and emotional processes become so distorted that persons can no longer live with themselves or with others

X. Ways to prevent an emotional problem

A. Keep emotions under control

(NOTE: Keep a balance in your life by working, sleeping, relaxing, and finding some type of recreation to keep pressure under control.)

B. Talk it off

(NOTE: Blow off your emotional "steam" to a sympathetic listener.)

C. Think it off

(NOTE: Consider both sides of the problem and attempt to see the other person's viewpoint. You could learn something.)

D. Work it off

(NOTE: Get out there and jog, play tennis, sew. Try to work out your emotions.)

INFORMATION SHEET

XI. Steps to improve personality

- A. Recognize the need for improvement
- B. Have a desire to improve
- C. Evaluate strong and weak points
- D. Develop a plan for improvement
- E. Follow through with your plan

INTRODUCTION TO NURSING
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UNIT I

ASSIGNMENT SHEET #1--COMPLETE PERSONAL PROFILE

NAME ____

In the time you spend in this nursing program you will become very well-acquainted with your instructor(s). They will be responsible for giving you the instruction you need to be successful in your nursing profession. Because they are interested in you as a student and as a person and want you to do your very best, they need some information to help them. Please be very honest in filling out the form below. The information will be kept confidential in your personal file. The questions are not meant to pry into your personal life but only to give you the opportunity to let the instructor know if you have areas you would like assistance with from the beginning of the program. Feel free to talk to them about any of the information below.

(NOTE: If any of these areas do not apply to you mark NA in the blank.)

NAME ____________________________________ BIRTH DATE ________
LAST FIRST MIDDLE OR MAIDEN

ADDRESS ________________________________ MALE ___ FEMALE ___

CITY ______________ STATE ________ ZIP ______ MARITAL STATUS ___

SPOUSE'S NAME ____________________________ ETHNIC ORIGIN _____

SPOUSE'S OCCUPATION ______________________________________

ARE YOU RECEIVING FINANCIAL AID? ___________________________

IF SO, FROM WHERE? _______________________________________

DO YOU NEED ASSISTANCE IN SECURING FINANCIAL AID? ____________

NAMES OF CHILDREN AND AGES:

NAME	AGE

KINDS OF PETS:	NAME

ASSIGNMENT SHEET #1

WHAT WAS YOUR FAVORITE CLASS IN SCHOOL?______________________

LIST THE CLUBS OR ORGANIZATIONS TO WHICH YOU NOW BELONG:

DO YOU HOLD ANY OFFICES?____________ IF SO, WHAT OFFICE?__________

LIST YOUR HOBBIES:

HAVE YOU EXPERIENCED ANY PROBLEMS IN THE AREAS LISTED BELOW? IF YES, WHAT WAS THE NATURE OF EACH PROBLEM?

SCHOOL:

WORK:

ASSIGNMENT SHEET #1

HOME: ______________________________

ARE THERE ANY AREAS IN WHICH YOU FEEL WE SHOULD HAVE INFORMATION IN ORDER TO GIVE YOU MORE ASSISTANCE IN THIS PROGRAM?

DO YOU HAVE ANY SPECIAL WEAKNESSES WITH WHICH YOU MAY NEED HELP?

DO YOU PREFER TO WORK ALONE OR IN GROUPS? ______________

DO YOU OWN A CAR? ______________

LIST YOUR WORK EXPERIENCE BEGINNING WITH PRESENT POSITION:

YEAR	EMPLOYER	TYPE OF WORK

IS YOUR GENERAL HEALTH: GOOD _____ FAIR _____ POOR _____

IF YOU MARKED FAIR OR POOR, WHAT IS YOUR HEALTH PROBLEM? ______________

INTRODUCTION TO NURSING
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UNIT I

ASSIGNMENT SHEET #2--INCREASE SELF-AWARENESS

NAME ____

Self-awareness can be called the beginning of personal development. To be able to make sound decisions about future direction, you must recognize your values, ambitions, and goals. Furthermore, you need to know your relationship to others and just how you fit into the scheme of life, whether at home, at school, or in the community.

The purpose of this assignment is to help you become more aware of yourself and your feelings. The following questions are to be answered quickly, relying on first thoughts, and should not be dwelt upon for any period of time. Use your answers for later reference in class discussion.

(NOTE: These questions have no right or wrong answers! If questions do not apply in your situation, write N/A in the blank.)

1. What is your favorite color? ______________________________
2. What subject do you enjoy most in school? ______________________________

   Enjoy least? ______________________________
3. What is your favorite pastime? ______________________________
4. What is your favorite holiday? ______________________________
5. What food do you like best? ______________________________
6. What car do you like best? ______________________________
7. What makes you sad? ______________________________

   Happy? ______________________________
8. If you could only save one personal item, what would it be? ______________________________

   ____
9. At what time in history would you choose to live? ______________________________

   ____
10. If you had any one place you could visit, where would it be? ______________________________

    ____

ASSIGNMENT SHEET #2

11. What special talents would you like to have?______________________________

____

12. What quality would you add to your personality or character?________________

____

13. What quality would you like to get rid of?______________________________

____

14. If you could spend one hour talking with anyone in the world, who would it be?_____

____

15. What is your biggest problem or concern that you need to solve right now?_________

____

As a nurse you will be faced with some tough problems to solve and maybe a few disagreeable people. If you are aware that you have some problems in handling yourself in certain situations, then you may be able to learn to act in ways that are better for you and the people you work with. Take your time on the next few questions and be honest with yourself about these touchy areas. Talk it over in class. You are probably not alone in your feelings.

16. How do you act when you are angry?

____

____

____

17. Do you think that you are a patient person? Why or why not?

____

____

____

18. What has been the most stressful situation in your life and how did you handle it?

____

____

____

____

____

ASSIGNMENT SHEET #2

19. Do you have hard and fast ideas about religious, political, and moral views? What has influenced your views?

20. Do you think you can be non-judgmental if faced with a situation that you do not believe in? For instance, how do you feel about issues such as:

    a. Abortion ______

    b. Homosexuality ______

    c. Euthanasia (mercy killing) ______

    d. Child abuse ______

    e. Other ______

21. How do you handle criticism?

22. Can you be comfortable in working with a terminally ill patient?

ASSIGNMENT SHEET #2

23. What experiences have you had with death or dying?

____

____

____

____

____

REMEMBER:

SELF-AWARENESS

↓

SELF-ACCEPTANCE

↓

POSITIVE SELF-IMAGE

↓

SUCCESS

INTRODUCTION TO NURSING
AND ASSESSMENT OF INDIVIDUAL
UNIT I

ASSIGNMENT SHEET #3--COMPLETE SELF-ASSESSMENT RATING

NAME ____

One of the best ways to assess yourself is to rate yourself honestly and critically. The self-rating list for the IDEAL health worker, given below, will help to give you some clues to the things employers will look for in you. There are no "right" or "wrong" answers, just information that you will want to consider or discuss with classmates or instructor.

Rate yourself as follows:
(5) Excellent
(4) Very Good
(3) Average
(2) Below Average
(1) Needs Improvement

_____ Clean uniform, attractive and appropriate dress (rate wearing apparel at this time)

_____ Clear, well-modulated voice

_____ Easily-controlled posture in bending, sitting, walking, and standing

_____ Good physical health

_____ Poised and well-controlled, especially under difficult conditions

_____ Enjoyment of people and being with people

_____ Courtesy in dealing with patients and their relatives

_____ Ability to understand and appreciate other people's problems and responsibilities

_____ Promptness and reliability in reporting to the job

_____ Willingness to follow the rules and regulations of the institution

_____ Good sense of humor but not at the expense of others

_____ Cooperation with other staff members

_____ Enthusiasm which is sincere and contagious

_____ Constructive reaction to criticsm

_____ Quick and accurate decision making

_____ Perseverance

ASSIGNMENT SHEET #3

______ Willingness to look for opportunities to serve others better

______ Exertion of positive leadership

______ Freedom from prejudice

______ Loyalty to superiors and associates

INTRODUCTION TO NURSING AND ASSESSMENT OF INDIVIDUAL
UNIT I

ASSIGNMENT SHEET #4--EVALUATE PERSONAL HABITS

NAME ______________________________

Good grooming is essential to career success. Poor personal appearance was identified as the number one reason why people are not hired during an employment interview. Remember, the employer's first impression of you is based on how you look. Furthermore, an employer expects you to continue to "represent" the facility in appearance and action. With this in mind, complete the chart below and then answer the questions which follow.

	Always	Most of the Time	Occasionally	Seldom or Never
BODY CLEANLINESS AND CARE Do you bathe at least once daily?				
Do you bathe soon after participating in strenuous activity?				
Do you use an effective deodorant daily?				
Do you keep your undergarments fresh and clean?				
POSTURE Do you sit properly without slouching?				
Do you stand properly with chin up and shoulders back?				
Do you walk with your head held high and at a fast pace?				
TEETH, MOUTH, AND BREATH Do you have a dental checkup at least once a year?				
Do you brush your teeth at least twice daily?				
Do you use good dental hygiene to avoid bad breath?				

ASSIGNMENT SHEET #4

	Always	Most of the Time	Occasionally	Seldom or Never
Are you conscious of the fact that gum and sweets may be harmful to your teeth?				
HAIR				
Do you avoid combing or brushing your hair in public?				
Do you wash your hair at least once a week?				
Do you brush your hair daily as needed?				
Do you wear your hair in a style that is becoming to you?				
Do you keep your brush and comb clean?				
If you have dandruff, have you tried a medicated shampoo or seen a doctor?				
Are you clean-shaven?				
FACE Is your skin clean and well-cared for?				
Is your makeup obvious?				
Do you avoid applying makeup in public?				
HANDS Do you refrain from biting your fingernails?				
Are your fingernails clean and trimmed to a moderate length?				

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ASSIGNMENT SHEET #4

	Always	Most of the Time	Occasionally	Seldom or Never
CLOTHING Do you keep your clothes in good repair, that is, no ripped seams, no missing buttons, and no pins, tape, or staples in hems?				
Do your clothes look neat, clean, and pressed?				
Do your clothes fit properly?				
Do you wear clothes appropriate to the occasion?				
Do you wear shoes that fit properly?				
Do you keep your shoes brushed or polished and in good condition? (NOTE: Avoid overrun heels, scuffs, and lack of shoelaces.)				
Do you keep your outer garments free from dandruff and lint?				
Do you ever use clothing as a means to rebel?				
GENERAL HEALTH AND APPEARANCE Do you make an effort to eat a balanced diet each day?				
Do you watch your weight carefully and try to keep it at the recommended weight for you?				
Do you avoid "junk foods"?				
Do you avoid eating what you know is harmful to you?				
If you had a serious skin problem, would you consult a dermatologist?				
Do you get enough sleep each night?				

ASSIGNMENT SHEET #4

	Always	Most of the Time	Occasionally	Seldom or Never
Do you have physical checkups regularly?				
Do you get sufficient physical activity?				
Are you absent no more than 1 1/4 days out of 30 on account of illness?				
Do you choose clothes that are becoming to you?				
Do you avoid extremes in styles?				

1. What are your strengths in your personal grooming habits?

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ASSIGNMENT SHEET #4

2. What areas of your personal grooming habits need improvement?

Adapted with permission from Homemaking Research Laboratories. *Individual Instruction Units in Clothing.* Tony, Wisconsin, 1976.

INTRODUCTION TO NURSING
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ASSIGNMENT SHEET #5--DESCRIBE PERSONAL CONCEPT OF A NURSE

NAME________________________________ SCORE______________

The Oklahoma Board of Nurse Registration and Nursing Education defines the practice of practical nursing as follows: "Performance for compensation of nursing services (a) in the care of those not acutely ill, such as the convalescent, aged, or infirm, (b) in other care, such as in the case of those more acutely ill, under the supervision and/or direction of a registered professional nurse, or a licensed physician or dentist, which includes the administration of medications and treatments prescribed by a licensed physician or dentist, and (c) the teaching of nurse aides." What is your concept of a nurse? Answer the following questions.

1. What does a nurse look like?________________________________

   ____

   What *should* a nurse look like?

   ____

   ____

2. How do movies and television shows portray the nurse?______________

   ____

   ____

   ____

3. Have you seen a nurse or nurses in a hospital or physician's office lately?________

   What functions have they performed?____________________________

   ____

   ____

   ____

4. Why did you choose the nursing profession?_________________________

   ____

   ____

   ____

ASSIGNMENT SHEET #5

5. Listed below are some reasons that persons go into the nursing profession. For some people, though, some are advantages and some disadvantages. When you think about why you chose nursing, discuss below why the reasons are advantages or disadvantages for you.

   a. Professional pride-- ____________________

   b. Security-- ____________________

   c. Availability of work and geographic mobility-- ____________________

   d. Variety of work-- ____________________

   e. Advancement-- ____________________

   f. Salary and benefits-- ____________________

   g. Shift work-- ____________________

   h. Wardrobe of uniforms versus buying street clothes-- ____________________

   i. Educational opportunities-- ____________________

6. How would you compare the definition of the practical nurse with your concept of a nurse?

____

INTRODUCTION TO NURSING
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UNIT I

ASSIGNMENT SHEET #6--WRITE PERSONAL OBJECTIVES FOR THE PRACTICAL NURSE PROGRAM

NAME ______________________________ SCORE ______________

You have chosen to enter this program to become a practical nurse. When you interviewed and applied you had certain objectives for wanting to complete this program. There are many reasons for wanting to become a practical nurse. Some are personal, such as a dedication to help others. Some result from financial security gained from the knowledge that employment is out there waiting for you. Think for a few minutes about your objectives for the time that you will be in the program. What things do you want to learn during this course of study? List the objectives below that you hope to reach this year.

1. Objective one ______________________________
2. Objective two ______________________________
3. Objective three ______________________________
4. Objective four ______________________________
5. General goals ______________________________

INTRODUCTION TO NURSING
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UNIT I

TEST

NAME________________________________ SCORE______________

1. Match terms associated with introduction to nursing and assessment of the individual to the correct definitions. Write the correct numbers in the appropriate blanks.

_____a. State of complete physical, mental, and social well-being; not merely the absence of disease or infirmity

_____b. Conscious or unconscious mental views developed through cumulative experience

_____c. Any specific feeling that results in mental and physical effects

_____d. First step in the nursing process in which pertinent data are obtained, organized, and analyzed against normal expectations

_____e. Knowledge or feeling of right and wrong with a compulsion to do right

_____f. One who provides services directed toward health promotion, detection and treatment of disease, and the restoring of optimal functioning in relation to individuals, families, and communities

_____g. Each person's own set of traits, characteristics, and modes of behavior

_____h. Course of action that includes patient assessment, planning, implementation, and evaluation of care

_____i. Preconceived judgment or opinion

_____j. Free from all prejudice

_____k. Carrying out a plan of action

_____l. One who functions as a member of the health care team to plan, implement, and evaluate nursing care, especially direct patient care under the guidance of registered nurses, physicians, and dentists

1. Conscience
2. Attitude
3. Nursing assessment
4. Health
5. Personality
6. Nursing process
7. Nurse
8. Emotions
9. Prejudice
10. Unbiased
11. Implementation
12. Practical nurse

_____m. Expected behavior usually determined by an individual's status

_____n. Measure of worth or efficiency

_____o. Image of something as held in the mind

_____p. Adhering firmly to a code of values, especially moral

_____q. Capacity to experience another's feelings or ideas

_____r. Conforming to an accepted professional conduct

_____s. Profession that provides health care for all individuals including direct patient care, rehabilitation programs, prevention of disease, and promotion of wellness

13. Values
14. Role
15. Integrity
16. Concept
17. Empathy
18. Ethical
19. Nursing

2. List general functions of a nurse.

a. ____

b. ____

c. ____

d. ____

e. ____

f. ____

g. ____

3. Describe the roles of the practical nurse.

____

____

____

____

____

____

____

____

4. List personality characteristics desirable for a nurse.

a. ______________________

b. ______________________

c. ______________________

d. ______________________

e. ______________________

f. ______________________

g. ______________________

h. ______________________

i. ______________________

5. List below job opportunities for the practical nurse.

a. ______________________

b. ______________________

c. ______________________

d. ______________________

e. ______________________

f. ______________________

g. ______________________

h. ______________________

i. ______________________

j. ______________________

k. ______________________

6. Discuss factors below that affect health and appearance.

a. Cleanliness-- ______________________

____

b. Diet-- ______________________

____

c. Proper elimination habits-- ______________________________

____

d. Exercise-- ______________________________

____

e. Sleep and rest-- ______________________________

____

f. Posture-- ______________________________

____

g. Eye care-- ______________________________

____

h. Dental care-- ______________________________

____

i. Habits-- ______________________________

____

j. Immunizations-- ______________________________

____

7. Describe factors that influence appropriate clothing selection.

a. Clothing

1) ______________________________
2) ______________________________
3) ______________________________

b. Accessories

1) ______________________________
2) ______________________________
3) ______________________________
4) ______________________________

8. Select from the list below characteristics of an emotionally mature person. Mark each correct answer with an "X."

_____a. Is considerate of others
_____b. Channels emotional drives into constructive activity
_____c. Likes everyone
_____d. Blames others for failures
_____e. Accepts disappointments with courage and composure

_____f. Is confident of success and willing to wait and work for it

_____g. Accepts other people as they are

_____h. Creates a relaxed and pleasant social atmosphere

9. Distinguish between "normal" (N) and "abnormal" (A) behavior. Write the correct letter in the blanks.

_____a. Problems are solved by changing the environment

_____b. Adjustment cannot be made to other people

_____c. Crises are faced with minimal frustration and emotional turmoil

_____d. Thought and emotional processes become so distorted that persons can no longer live with themselves or with others

_____e. Goals are pursued and life has purpose

_____f. Behavior is adapted to other people and adjustments are made easily to new situations

_____g. Purpose and pleasure in living is lost

_____h. People are controlled by their environment

10. State ways to prevent an emotional problem.

a. ____

b. ____

c. ____

d. ____

11. Arrange in order steps to improve personality. Write a "1" by the first step, a "2" by the second step, and so on.

_____a. Evaluate strong and weak points

_____b. Follow through with your plan

_____c. Have a desire to improve

_____d. Develop a plan for improvement

_____e. Recognize the need for improvement

12. Complete personal profile.

13. Increase self-awareness.

14. Complete self-assessment rating.

15. Evaluate personal habits.
16. Describe personal concept of a nurse.
17. Write personal objectives for the practical nurse program.

(NOTE: If activities 12-17 have not been finished before the test, ask your instructor when they should be completed.)

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ANSWERS TO TEST

1. a. 4
   b. 2
   c. 8
   d. 3
   e. 1
   f. 7
   g. 5
   h. 6
   i. 9
   j. 10
   k. 11
   l. 12
   m. 14
   n. 13
   o. 16
   p. 15
   q. 17
   r. 18
   s. 19

2. a. Observe
   b. Communicate
   c. Apply knowledge from various sciences
   d. Perform procedures
   e. Work with others
   f. Teach
   g. Manage by planning, directing, and evaluating

3. Description should include:
   a. Functions as a member of the health care team
   b. Plays a part in the planning, implementation, and evaluation of nursing care
   c. Provides for the emotional and physical comfort and safety of patients
   d. Observes, records, and reports changes in patient's symptoms and conditions
   e. Performs specialized and specific nursing functions
   f. Serves as resource person in community to help others obtain needed health services

4. a. Ethical
   b. Sincere
   c. Tactful
   d. Determined
   e. Responsible
   f. Empathetic
   g. Flexible
   h. Poised
   i. Unbiased
5. a. Hospitals
   b. Nursing homes
   c. Extended care facilities
   d. Physicians'/dentists' offices
   e. Industry
   f. Schools
   g. Community health centers
   h. Public health facilities
   i. Visiting nurse services
   j. Private patients in homes
   k. Military
6. Discussion should include:
   a. Cleanliness–Includes daily cleansing of the entire body with a lather of mild soap and water; use of effective products to eliminate body odor; clean and neatly trimmed or filed fingernails
   b. Diet--Include the basic four food groups to obtain needed nutrients
   c. Proper elimination habits--Balanced diet, intake of adequate fluids and exercise promote good bowel habits
   d. Exercise--Builds and tones the muscles, promotes circulation and respiration exchange
   e. Sleep and rest–Refreshes all body systems
   f. Posture--Good body posture prevents strain; assists body systems in proper functioning

- g. Eye care--Prevent strain by having the best light possible; have yearly eye checks
- h. Dental care--Brush teeth daily, use floss, have regular dental checkups and do not use teeth to open objects
- i. Habits--Change habits that are harmful to your body; attempt to practice good health habits
- j. Immunizations–Keep all available immunizations against diseases current

7. Descriptions should include:
    - a. Clothing
        - 1) Spotlessly clean and wrinkle free
        - 2) Free from rips, tears, missing buttons, or sagging hemlines
        - 3) Properly fitted
    - b. Accessories
        - 1) Shoes kept clean, polished, and in good repair
        - 2) Hosiery free from snags and runners
        - 3) Undergarments appropriate for outer garments
        - 4) Jewelry kept simple, not overpowering
8. a, b, e, f, g, h
9. a. N
    - b. A
    - c. N
    - d. A
    - e. N
    - f. N
    - g. A
    - h. A
10. a. Keep emotions under control
    - b. Talk it off
    - c. Think it off
    - d. Work it off

11. a. 3
    b. 5
    c. 2
    d. 4
    e. 1

12. Evaluated to the satisfaction of the instructor

13. Evaluated to the satisfaction of the instructor

14. Evaluated to the satisfaction of the instructor

15. Evaluated to the satisfaction of the instructor

16. Evaluated to the satisfaction of the instructor

17. Evaluated to the satisfaction of the instructor

TECHNIQUES OF LEARNING
UNIT II

UNIT OBJECTIVE

After completing this unit, the student should be able to apply techniques of learning to effectively change study habits, retain information, and improve test scores. This knowledge will be evidenced by completion of assignment sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with techniques of learning to the correct definitions.
2. State techniques to be used in classroom learning.
3. Select from a list desirable study habits.
4. Arrange in order steps for using a textbook.
5. Describe the process of surveying a textbook.
6. Select from a list rules for reading a textbook.
7. State points to consider when reading a textbook.
8. Arrange in order steps to follow in researching materials.
9. Select from a list purposes of examinations.
10. Match types of examinations to the correct definitions.
11. Describe ways to prepare for examinations.
12. Select from a list points to remember when taking an exam.
13. Discuss methods for evaluating students' performance in classroom and clinical area.
14. State reasons a knowledge of basic math is important in nursing.
15. Practice basic math problems.
16. Practice using textbook skills.
17. Use library skills to research a health topic.
18. Evaluate study habits.

TECHNIQUES OF LEARNING
UNIT II

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

  A. Provide students with objective sheet.

  B. Provide students with information sheet.

  C. Discuss unit and specific objectives.

  D. Discuss information sheet.

  E. Provide students with assignment sheets and any additional material to assist in completion.

  Examples: Medical or nursing dictionary, reference materials on study techniques

  F. Review assignment sheets with students to see if students need additional assistance in math or reading.

  G. Have learning laboratory center person assist student if additional help is required.

  (NOTE: It will be much easier to identify problem areas at the beginning of the course and correct those areas before the student becomes discouraged.)

  H. Invite a resource person to speak to class on time management; relate the information to study habits.

  I. Invite librarian from school, city, or hospital to speak to class on the use of resource and reference materials.

  J. Show students enjoyable ways to study.

  Examples: Group or individual games such as concentration, bingo, word search

  K. Give test.

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

  C. Assignment sheets

    1. Assignment Sheet #1--Practice Basic Math Problems

2. Assignment Sheet #2--Practice Using Textbook Skills
3. Assignment Sheet #3--Use Library Skills to Research a Health Topic
4. Assignment Sheet #4--Evaluate Study Habits

D. Answers to assignment sheets

E. Test

F. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study*. Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

B. Morgan, Clifford, and Deese, James. *How to Study*. New York: McGraw-Hill Book Company, 1969.

C. Ross, Carmen F. *Personal and Vocational Relationships in Practical Nursing*. Philadelphia: J. B. Lippincott Company, 1975.

D. Staton, Thomas F. *How to Study*. 5th ed. Montgomery, Alabama: How to Study, 1968.

(NOTE: Inquiries concerning prices may be made by writing Distributor: How to Study, P.O. Box 6133, Montgomery, Alabama 36106.)

IV. Film--*How to Use the Accumulative Index for Nursing and Health Professions.* Available from Cumulative Index for Nursing and Health Literature, Box 871, Glendale, California 91209.

TECHNIQUES OF LEARNING
UNIT II

INFORMATION SHEET

I. Terms and definitions

   A. Learning--Gain knowledge, understanding, or skill by study, instruction, or experience

   B. Techniques--Methods used to accomplish a desired aim

   C. Survey--Examine condition, situation, or value

   D. Evaluation--Determine significance or worth by careful appraisal and study

II. Techniques to be used in classroom learning

   A. Have a positive attitude

      (NOTE: Come to class each day with an "I can do" attitude.)

   B. Build a new vocabulary

   C. Listen attentively

   D. Take notes

   E. Read assignments before class

   F. Ask questions if you do not understand

III. Desirable study habits (Assignment Sheet #4)

   (NOTE: Everyone has a "learning style," a way that is most effective for them. Adopt a consistent study pattern that produces the best results.)

   A. Prepare a time schedule for a specific, uninterrupted study time

      (NOTE: There is a difference between a "learner" and a "student." The learner studies to learn and gain knowledge. The student learns to pass the course.)

   B. Begin studying as soon as the course begins

   C. Choose a quiet, well-lit, and ventilated area in which to study

   D. Review classroom notes as soon as possible after class

   E. Take notes while reading assignments and references

      (NOTE: Underlining in your books [your own property] can be helpful if done correctly. Random underlining and underlining every word will not be helpful.)

INFORMATION SHEET

F. List unfamiliar words and look up their definitions

(NOTE: Medical terminology is very important because you must use it daily. It is important that you learn to pronounce, spell, and know the meaning of all words that you use in nursing.)

G. Use library for references and additional materials

(NOTE: Utilize the school library, the public library, and, if possible, a medical library. If you do not know how to look up materials, ask someone to assist you.)

H. Discuss what you have read with classmates

(NOTE: Avoid getting together for a gab session. It is helpful to sit down with classmates and review material, especially if you do not understand certain areas.)

IV. Steps for using a textbook (Assignment Sheet #2)

A. Survey

B. Question

(NOTE: As you look through the book, ask yourself questions about headings, topic sentences, tables, and pictures. Look at study questions or chapter summaries to see if all your questions about the chapter are answered.)

C. Read and reflect

(NOTE: Don't sit down and randomly read the whole chapter. Go over each topic or important paragraph and think about what you have read. Try to pick out the most important details and underline or highlight these sentences.)

D. Recite

(NOTE: After reading a paragraph, recite either out loud or to yourself what you have read, putting it in your own words. Does it make sense? If not, read again.)

E. Review

(NOTE: It is important to review material several times at different stages in your studying. After you read the chapter for the first time, review material to see if you understand what the author is saying. If you need more information, ask your instructor for reference material.)

INFORMATION SHEET

V. Process of surveying a textbook

- A. Begin survey by looking through book from front to back
- B. Read the preface to see what the author wanted to accomplish with the book
- C. Look through the table of contents to see what you will be studying
- D. Look at the pictures
- E. Notice the type of format the book uses

  Examples: Outline, narrative, case studies, questions
- F. Survey one chapter to see how the author organizes his or her material

VI. Rules for reading a textbook

- A. Concentrate on the subject matter
- B. Do not read to be reading; read to understand the information
- C. Read for main ideas and important details

  (NOTE: Do not underline when you are skimming over the unit, but when you are looking for the most important ideas. Underline after you have read several paragraphs under one heading so that you will know you have the most important information.)
- D. Ask instructor for help if material is difficult for you to read

  (NOTE: There are special courses and guides that can help you read more effectively.)

VII. Points to consider when reading a textbook

- A. Information given is one author's point of view

  (NOTE: Become open minded; look at other texts written on the subject. Take into consideration the date the text was written. Learn to look at many sources.)
- B. Read everything, including charts, tables, footnotes, and graphs

  (NOTE: Try to read and understand each component of the book.)
- C. Coordinate what you read with what you learn in the classroom; develop a system of taking lecture notes that can be used with notes taken from texts

INFORMATION SHEET

D. Remember that the reason you are reading these books is to gain knowledge to be used when you begin practicing patient care skills

Examples: Learn the digestive tract from top to bottom. This will help you understand many of the normal physiological processes that occur and are affected by certain medications and procedures

VIII. Steps in researching materials (Assignment Sheet #3)

(NOTE: Much research has been done on many subjects dealing with health. The knowledgeable nurse can easily pull resource materials together to gain information to use in dealing with health issues.)

A. Write down all topics that may be covered in the area that you are researching

Example: Birth control--Look for history, types, controversial issues, new methods, disadvantages and advantages

Use of marijuana--Look for legal implications of use, studies of the effects, new research of the use, use of drug for therapeutic relief in cancer, who uses marijuana and why, drug abuse centers' approach

B. Use a library source that gives you information on where to find the topics you have listed

Examples: *Reader's Guide to Periodical Literature, Facts on File*, or a good scientific encyclopedia index

(NOTE: If you are looking for a certain time period, look under the dates that you need. If you know the author's name of a certain article, look under that listing. The name of the article will be listed if you already have that information and want to find the name of the periodical containing the material.)

C. Read each article and write down in outline form the information most pertinent to the topic

(NOTE: Make sure you write down the source of information for reference.)

D. Be able to summarize the information in a more formal way, depending on the use of the material

Examples: Formal report, oral presentation, personal use of material

INFORMATION SHEET

IX. Purposes of examinations

   A. Assess knowledge or progress

   B. Measure performance

   C. Reinforce learning

   D. Evaluate teaching methods

X. Types of examinations

   A. Essay--Requires recall of information and writing a short, concise statement, paragraph, or page

   B. Completion--Requires recall of information (usually short-answer type) after being given partial information

   C. True and false--Requires student to distinguish between correct and incorrect information

   D. Multiple choice--Asked to choose one best response from a list of three or more responses

   E. Matching--Grouping of definitions or descriptions whose answers must be taken from a single list of possible answers

   F. Clinical performance--Shows progress in skill areas by using a checklist, observation by instructor, or observation by a skilled professional

   (NOTE: You may not be graded by the patients, but remember they will be evaluating you and your care.)

XI. Ways to prepare for examinations

   A. Have a positive attitude

   Examples: "I am going to study hard and do my best," rather than "I am going to flunk that exam anyway, so why study?"

   B. Study regularly

   (NOTE: Do not wait to cram the night before the exam. Study each day after class. Then review the night before you take the exam.)

   C. Follow a well-organized plan of review

   D. Write legible, well-organized notes

INFORMATION SHEET

E. Memorize needed facts, formulas, principles

(NOTE: There is some material in nursing that will have to be memorized. Use the best method for you to be able to recall information.)

F. Try to RELAX and enjoy learning

XII. Points to remember when taking an exam

A. Follow directions carefully

(NOTE: Make sure you give needed information, such as name, date, and student number, in the places indicated.)

B. Note number of questions, value of questions, and time allowed

C. Assign each question an appropriate percentage of total time

D. Answer easier questions first, then go back and answer more difficult ones

E. Read question thoroughly before writing any answer

(NOTE: Make sure you pick out the key words that tell you the meaning of the question.)

F. If answer sheets are being used, check carefully that the number of the question matches the number of the answer

(NOTE: A good way to do this is by laying test and answer sheet side by side and keeping one finger on the answer sheet, sliding finger down or over to the next blank.)

G. Check to see that *all* questions have been answered

(NOTE: Many times your first answer is correct, so consider carefully if you decide to change an answer.)

XIII. Methods for evaluating students' performance in classroom and clinical area

A. Participation by student in classroom and clinical area--Answers questions; enthusiastic about learning; dependable and punctual in clinical area

B. Response of student to instruction and criticism--Student has an open and responsive mind and can accept and benefit from constructive criticism

C. Behavior of student in classroom and clinical area--Shows professionalism, initiative, an open mind, eagerness to learn

INFORMATION SHEET

XIV. Reasons a knowledge of basic math is important in nursing (Assignment Sheet #1)

A. Math is used in calculating medication dosages

B. Accuracy may mean the difference between life and death

C. Basic math is used in many areas of the nursing profession

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TECHNIQUES OF LEARNING
UNIT II

ASSIGNMENT SHEET #1--PRACTICE BASIC MATH PROBLEMS

NAME ______________________________ SCORE __________

(NOTE: Do *not* use a calculator for this assignment sheet.)

ADD THE FOLLOWING SINGLE AND MULTIPLE COLUMNS. WRITE THE ANSWERS IN THE BLOCKS PROVIDED.

1.	2.	3.	4.	5.
3	9	5	4	1
8	7	2	8	8
6	6	8	9	1
9	7	9	8	6
8	9	6	9	3
+ 5	+ 2	+ 9	+ 7	+ 7

6.	7.	8.	9.	10.
26	98	68	88	560
65	49	46	43	791
36	77	50	56	165
33	71	46	55	817
73	10	63	99	965
+ 59	+ 19	+ 49	+ 49	+ 706

11.	12.	13.	14.	15.
233	564	987	7759	71449
430	95	579	4476	45543
981	744	953	9738	5505
487	593	75	6924	16237
103	58	223	9913	63574
+ 340	+ 287	+ 936	+ 5389	+ 25

ASSIGNMENT SHEET #1

SUBTRACT THE FOLLOWING SINGLE AND MULTIPLE COLUMNS. WRITE THE ANSWERS IN THE BLOCKS PROVIDED.

16. 7 - 5 ☐
17. 8 - 3 ☐
18. 6 - 2 ☐
19. 9 - 4 ☐
20. 9 - 6 ☐

21. 25 - 16 ☐
22. 41 - 28 ☐
23. 542 - 508 ☐
24. 861 - 714 ☐
25. 8514 - 3833 ☐

26. 17986 - 8099 ☐
27. 63303 - 7918 ☐
28. 21754 - 3461 ☐
29. 99761 - 26004 ☐
30. 86373 - 17607 ☐

MULTIPLY THE FOLLOWING SINGLE DIGIT NUMBERS. WRITE THE ANSWERS IN THE BLOCKS PROVIDED.

31. 9 x 8 ☐
32. 9 x 6 ☐
33. 6 x 7 ☐
34. 7 x 5 ☐
35. 4 x 8 ☐

36. 9 x 7 = ☐
37. 8 x 7 = ☐
38. 8 x 8 = ☐

39. 5 x 9 = ☐
40. 6 x 4 = ☐

ASSIGNMENT SHEET #1

ADD THE FOLLOWING FRACTIONS WITH UNLIKE DENOMINATORS. WRITE THE ANSWERS IN THE BLOCKS PROVIDED. REDUCE FRACTIONS TO LOWEST TERMS.

41. 1/2 + 1/3 =
42. 1/8 + 1/12 =
43. 1/5 + 1/7 =
44. 1/9 + 1/8 =
45. 1/7 + 2/9 =
46. 2/7 + 3/11 =
47. 2/11 + 3/13 =
48. 4/15 + 1/13 =
49. 1/2 + 1/3 + 1/4 =
50. 1/5 + 1/6 + 1/7 =
51. 1/2 + 1/3 + 1/5=
52. 1/4 + 1/9 + 1/7 =
53. 2/3 + 1/7 + 2/9 =
54. 2/9 + 3/7 + 1/2
55. 6/11 + 2/7 + 1/2 =
56. 2/7 + 2/9 + 2/5 =

MULTIPLY THE FOLLOWING FRACTIONS. WRITE THE ANSWERS IN THE BLOCKS PROVIDED. REDUCE FRACTIONS TO LOWEST TERMS.

57. 1/2 x 1/5 =
58. 2/3 x 3/5 =
59. 7/8 x 1/3 =
60. 3/4 x 6/7 =
61. 5/6 x 2/3 =
62. 5/6 x 3/5 =
63. 15/16 x 4/5 =
64. 3/16 x 8/9 =
65. 7/8 x 16 =
66. 4/5 x 60 =

ASSIGNMENT SHEET #1

ADD AND *SUBTRACT* DECIMALS. WRITE THE ANSWERS IN THE BLOCKS PROVIDED.

ADD

67. 10.4 + 8.2 =

68. 0.025 + 2.89 + 78 =

69. 6.4 + 5.3 + 9.60 + 2.09 =

SUBTRACT

70. 0.6 - 0.48 =

71. 10.08 - 7.56 =

72. 126.86 - 7.651 =

MULTIPLY AND *DIVIDE* DECIMALS. WRITE THE ANSWERS IN THE BLOCKS PROVIDED.

MULTIPLY

73. 0.573 x 4.5 =

ASSIGNMENT SHEET #1

74. 14.573 x 0.006 = ☐

75. 0.0047 x 8.02 = ☐

DIVIDE

76. 2.04 ÷ 2.5 = ☐

77. 78.4 ÷ 0.02 = ☐

78. 0.07605 ÷ 15 = ☐

FIND THE FOLLOWING *PERCENTAGES.* WRITE THE ANSWERS IN THE BLOCKS PROVIDED.

79. Change the following to percentages:

a. 1/2 = ☐ b. 3/4 = ☐ c. 1/4 = ☐

80. Solve the following:

a. 2% of 80 = ☐ b. 0.5% of 2000 = ☐

TECHNIQUES OF LEARNING
UNIT II

ASSIGNMENT SHEET #2--PRACTICE USING TEXTBOOK SKILLS

NAME ______________________________ SCORE __________

In this unit you have learned techniques to help you use textbooks more effectively. Using this page and the following pages, complete these tasks.

1. Read the material thoroughly.
2. Underline or highlight the most important information.

DIARRHEA

Diarrhea is one of the cardinal symptoms of small-bowel disease. It is a condition in which there is unusual frequency of bowel movements, as well as changes in the amount, the character, and the consistency of the stools. It is best defined, quantitatively, as more than 200 gm. of stool per day.

Clinical Manifestations. In acute cases the stools are grayish-brown, foul smelling, and filled with undigested particles of food and mucus. The patient complains of abdominal cramps, distention, intestinal rumbling (borborygmus), anorexia, and thirst. Painful spasms (tenesmus) of the anus may attend each defecation.

Nursing Assessment. Diarrhea and its associated symptoms occur in a variety of disorders. The nurse will facilitate the diagnosis in each case by recording discerning observations, including the patient's symptoms, behavior, and remarks. Watery stools are characteristic of small-bowel disease, whereas loose, semisolid stools are associated more often with disorders of the colon. Voluminous, greasy stools suggest intestinal malabsorption, and the presence of mucus and pus in the stools denotes inflammatory enteritis or colitis. Oil droplets in the toilet water are almost always diagnostic of pancreatic insufficiency. Nocturnal diarrhea may be a manifestation of diabetic neuropathy.

Questions to ask the patient include:
Do you have loose stools or more frequent stools? How frequent? What do they look like?
How long have you had this problem? Is this the first time?
Does this occur during the day only? Just in the morning? Nightly too?
Is there an urgency about your movements? Signs of incontinency?
Have you noticed mucus mixed with your stool? Blood, pus, or undigested food?
Have you traveled recently? Out of the country?

Acute Diarrhea

Pathophysiology. Most acute diarrheas are due to increased secretion of water and electrolytes by the intestinal mucosa. The irritant stimulating the diarrhea may arise from a localized infection or ulceration in the intestinal wall, due, for example, to a carcinoma, a diverticulitis, or a tuberculous lesion. The irritant may be chemical. Castor oil, after it has been acted upon by the digestive juice, is an example of a mild intestinal irritant, as are most of the vegetable cathartics. Certain unripe fruits, which cause crampy diarrhea, likewise belong in this category.

The inflammatory response to these mild irritants is slight; little or no mucous membrane lining is destroyed on exposure to them unless their concentration in the intestinal fluid is excessive. Their chief effect is to produce hyperemia (vascular dilatation, with local increase in blood flow) of the intestinal mucosa and increase in mucous secretion. There also occurs a motor response of hyperperistalsis, which persists until the irritant is excreted. This explains the symptoms of crampy diarrhea.

Infectious. By far the most common intestinal irritants are the products of certain bacteria, whether their growth occurred in the intestine or in the food before it was eaten. In the case of the enteric pathogens, the organisms causing bacillary dysentery, bacterial growth with release of the irritating toxins takes place in the intestine. On the other hand, practically all cases of food poisoning, or ptomaine poisoning, are due to the ingestion of food heavily contaminated and already containing the toxin. *Staphylococcus aureus*, for example, if given an opportunity to grow in food, produces an exotoxin that is extremely irritating to the intestinal tract.

Whether the gastrointestinal tract is exposed to toxins introduced in food or produced by bacteria growing within the intestine, an infectious enterocolitis is produced. The inflammatory response may vary from mild hyperemia and hypermotility of the gastrointestinal tract to severe inflammation of the intestine, depending on the virulence of the infecting organism and the amount of toxin liberated.

Clinically, except for the presence of diarrhea, there is little similarity between a case of food poisoning due to the ingestion of food containing bacterial toxins and a case of bacillary dysentery. The diarrhea in food poisoning is explosive in onset, develops within a very few hours following the toxic meal and, except in severe cases, subsides within one or two days--as soon as the toxin is excreted and the inflammatory response subsides. There is little or no fever, and usually the only associated symptoms are those directly attributable to the diarrhea, namely, dehydration and weakness.

Dysentery due to the growth of gastrointestinal pathogens within the gastrointestinal tract, on the other hand, develops with a more gradual onset, persists for several days or weeks, with striking constitutional symptoms in addition to the diarrhea.

These clinical differences are quite understandable when it is realized that in the infectious diarrheas, a bacterial invasion of the intestinal mucosa is involved. Then, not only must the bacterial toxins be excreted or destroyed, but also the bacteria themselves must be eradicated, and this takes considerably longer.

Assessment. The diagnosis of an acute diarrhea is based on the course of the disease: the type of onset and progression, the presence or absence of fever, and a study of the stools, which are examined for bacteria as well as for blood and pus. In cases of possible infection, the suspected food is tested by bacteriologic cultures. It is very important to remember that diarrhea often is present in various systemic infections. It may be the initial misleading complaint in certain of the exanthemata before the appearance of the rash, or it may appear as an early symptom of hepatitis. It may complicate or mask such conditions as pneumonia and pyelitis.

Management and Nursing Intervention. Patients with acute diarrhea are placed on bed rest until the episode has terminated. Fluid and electrolyte replacement, orally or parenterally, is an extremely important measure, symptomatically as well as supportively. During the acute stages the gastrointestinal tract is kept at rest by administering only liquids and foods low in bulk or by withholding oral feeding entirely. Glucose can be absorbed normally in many diarrheas and will reduce water loss.

The following antidiarrheal agents are given to delay the passage of food through the intestine: Kaopectate (hydrated aluminum silicate kaolin with pectin) as an absorbent, and diphenoxylate hydrochloride (Lomotil); narcotics, such as paregoric (camphorated tincture of opium) and codeine, which delay transit through the

ASSIGNMENT SHEET #2

intestine.

Preventive Health Measures. All cases of acute diarrhea should be treated as potentially infective until they are proved otherwise. If the diarrhea is of infectious origin, those caring for the patient should determine whether there is any diarrhea among the family and neighbors. Ask the patient about recent sources of food and water. By reporting a larger than usual number of cases of diarrhea, the nurse assists in determining whether an epidemic is starting in the community.

Proper precautions to avoid the spread of the disease through contamination of the hands, the clothing, the bed linen, etc., with feces or vomitus, must be taken.

Diarrhea always should be regarded as a potential risk under conditions of crowding; outbreaks occur with particular frequency in institutions such as prisons, boarding schools, army camps, trailer camps, and even hospitals, unless sanitary precautions are observed rigidly and constantly.

Precautions include ensuring that proper storage and refrigeration facilities are available and are used for the handling of all fresh fruits and meats. Meat and milk products should be refrigerated constantly and protected against exposure. Food items that are particularly prone to infection and provide the best environment for bacterial growth include custards and cream fillings, such as are prepared in eclairs, cream pies, layer cakes, cream puffs, etc. Such materials should be cooked thoroughly and should then be brought to refrigerator temperature immediately, unless they are to be eaten within a very few hours after cooking.

Proper housekeeping, especially in kitchen maintenance, is obviously very important in the prevention of epidemic diarrhea. All materials used in the preparation and the serving of food must be cleansed rigorously and kept in immaculate condition. All food handlers should receive detailed instructions in hygienic principles and practices and, upon the development of any illness that is potentially infectious, should be relieved of their duties immediately.

3. Look up words that you do not understand. Write the words and their definitions below.

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ASSIGNMENT SHEET #2

4. Write down the "questions to ask the patient" from the fourth paragraph of the article. Ask yourself, "Do I understand the question and will the patient understand what I want? How could some of the questions be changed to have clearer meaning? What words would I change that are too technical for patients?

   a. Questions to ask the patient

   b. Questions that have been changed

   c. Words that need to be changed to simpler words

5. Read the material again and take notes. Outline the notes on the lines given below and on the next page.

ASSIGNMENT SHEET #2

ASSIGNMENT SHEET #2

6. Develop 10 examination questions from the material you have read. Use each type of question listed on the information sheet at least once. Write these below.

   (NOTE: Select material according to what you think is the most important information.)

7. Exchange test questions with a classmate and answer his or her questions. After you complete this task discuss in class why you thought the information you used was the most important.

   (NOTE: Now you see how difficult it is for your instructor to choose material and make test questions. You may now empathize when she or he gives you a test.)

TECHNIQUES OF LEARNING
UNIT II

ASSIGNMENT SHEET #3--USE LIBRARY SKILLS TO RESEARCH A HEALTH TOPIC

NAME____ SCORE____________

There will be many times that you will need to look up material relevant to a health topic. This information will be needed to solve problems, answer questions, write reports or for your own knowledge. In this unit you were given instructions on how to research materials. Using this information, research a topic given to you by your instructor. Respond to each part of this assignment sheet using the information you gather. Use three different sources.

PART I

Write down all topics that might contain information you need.

PART II

List library resources from which you have taken the information.

ASSIGNMENT SHEET #3

PART III

Write down the most pertinent information from each article.

ASSIGNMENT SHEET #3

PART IV

Summarize the information, writing down what you feel is most important.

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TECHNIQUES OF LEARNING
UNIT II

ASSIGNMENT SHEET #4--EVALUATE STUDY HABITS

NAME ______________________________ SCORE ____________

This assignment sheet has no right or wrong answers and you will not receive a score. It is to be used to evaluate and assist you in studying more effectively.

	YES	NO
1. Is your notebook standard size (8 1/2 x 11) with looseleaf paper?	____	____
2. Do you keep the notes for one course separated from the notes for other courses?	____	____
3. Do you take notes in shorthand or use other abbreviations?	____	____
4. Do you use brief phrases rather than complete sentences for notes?	____	____
5. Do you spend a great deal of time sorting papers before beginning to study?	____	____
6. Do you use notes in studying for an examination?	____	____
7. Do you review notes of the previous class before studying the assigned lesson?	____	____
8. Do you recopy notes taken in class so that the notebook will be neat?	____	____
9. Do you usually participate in class discussion?	____	____
10. Do you volunteer to answer questions in class?	____	____
11. Do you ask questions in class if you do not understand a point made in lecture?	____	____
12. Are you frequently late to class?	____	____
13. Do you frequently read your mail during class?	____	____
14. Are you frequently inattentive in class?	____	____
15. Do you sometimes write letters during a lecture hour?	____	____
16. Do you close your notebook, stack books, and get ready to leave before the bell rings for the end of class?	____	____

ASSIGNMENT SHEET #4

	YES	NO
17. Do you take all permissible "cuts" from class?	____	____
18. Do you turn in written assignments after the date due?	____	____
19. Do you frequently whisper to your neighbors during class?	____	____
20. If you receive a failing grade on a test, do you discuss it with the teacher?	____	____
21. Do you spend more time on subjects you like than on subjects you dislike?	____	____
22. Do you close the window and door in your room while studying?	____	____
23. Do you study with the radio turned on?	____	____
24. Is there adequate light for study?	____	____
25. Do you make an effort to reduce environmental distractions?	____	____
26. Do you study while reclining on the bed or in an easy chair?	____	____
27. Do you usually enjoy attending classes?	____	____
28. Do you have any articles on your desk that distract you while you are studying?	____	____
29. Can you get more done if you study in the library?	____	____
30. Do you frequently allow personal problems to interfere with your effort to study?	____	____
31. Are you familiar with the *Reader's Guide to Periodical Literature*?	____	____
32. Do you understand the card catalog system used in your library?	____	____
33. Do you resent having your class or clinical laboratory work criticized?	____	____
34. Do you seek help without being told you need it?	____	____
35. Do you usually go to bed not later than 11 p.m.?	____	____
36. Do you plan time for outdoor exercise each day?	____	____

ASSIGNMENT SHEET #4

	YES	NO
37. Do you usually get up early enough to allow time for breakfast?	____	____
38. Do you find you daydream when you should be studying?	____	____
39. Have you ever planned a schedule of activities for a day?	____	____
40. If you plan for study and work, do you follow such a daily plan?	____	____
41. Do you sometimes study early in the morning?	____	____
42. Do you always study at night?	____	____
43. Do you sometimes study in a free hour between classes?	____	____
44. Are you able to recognize the important points in an assigned lesson?	____	____
45. Do you study charts, diagrams, and other illustrations in the lesson?	____	____
46. Do you use the numbered subpoints, topic headings, or other chapter breakdowns as guides to learning?	____	____
47. Do you try to include in your notes the statements stressed in lecture?	____	____
48. Do you often argue with a teacher about examination questions marked wrong?	____	____
49. Do you feel that your teacher grades unfairly?	____	____
50. Do you often feel you know the lesson, then fail a quiz given in class?	____	____
51. Do you usually read the lesson hurriedly, then repeat for detail?	____	____
52. Do you read the listing of topical outlines before reading the chapter?	____	____
53. Do you turn topical headings into questions for study?	____	____
54. Do you underline as a means of studying a lesson?	____	____
55. Do you take brief, meaningful notes while studying?	____	____

ASSIGNMENT SHEET #4

	YES	NO
56. Do you study with intent to remember material studied?	____	____
57. Is your handwriting illegible so that notes are hard to read?	____	____
58. Do you review the previous lesson before studying the assigned one?	____	____
59. If you "had it to do over," would you still choose nursing?	____	____
60. Are you in nursing primarily to please someone else?	____	____
61. Do you feel that too much study is required of beginning students?	____	____
62. Is more emphasis placed on passing the test than on learning the subject material?	____	____

Look at all the questions you answered and decide what your strengths are. List them below.

Look at all the questions you answered and decide what your weaknesses are. List them below.

ASSIGNMENT SHEET #4

List below ways you can improve your study skills and strengthen those weak areas.

PN I - 79-A

TECHNIQUES OF LEARNING
UNIT II

ANSWERS TO ASSIGNMENT SHEETS

Assignment Sheet #1

1. 39
2. 40
3. 39
4. 45
5. 26
6. 292
7. 324
8. 322
9. 390
10. 4,004
11. 2,574
12. 2,341
13. 3,753
14. 44,199
15. 202, 333
16. 2
17. 5
18. 4
19. 5
20. 3
21. 9
22. 13
23. 34
24. 147
25. 4,681
26. 9,887
27. 55,385
28. 18,293
29. 73,757
30. 68,766
31. 72
32. 54
33. 42
34. 35
35. 32
36. 63
37. 56
38. 64
39. 45
40. 24
41. 5/6
42. 5/24
43. 12/35
44. 17/72
45. 23/63
46. 43/77
47. 59/143
48. 67/195
49. 1 1/12
50. 107/210

51. 1 1/30
52. 127/252
53. 1 2/63
54. 1 19/126
55. 1 51/154
56. 286/315
57. 1/10
58. 6/15
59. 7/24
60. 18/28 or 9/14
61. 10/18 or 5/9
62. 15/30 or 1/2
63. 60/80 or 3/4
64. 24/144 or 1/6
65. 112/8 or 14
66. 240/5 or 48
67. 18.6
68. 80.915
69. 23.39
70. 0.12
71. 2.52
72. 119.209
73. 2.5785
74. 0.087438
75. 0.037694
76. 0.816
77. 3920
78. 0.00507
79. a. 50%
    b. 75%
    c. 25%
80. a. 1.6
    b. 10

TECHNIQUES OF LEARNING
UNIT II

TEST

NAME ______________________________ SCORE __________

1. Match terms related to techniques of learning to the correct definitions. Write the correct number in each of the blanks.

_____a. Methods used to accomplish a desired aim

_____b. Determine significance or worth by careful appraisal and study

_____c. Gain knowledge, understanding, or skill by study, instruction, or experience

_____d. Examine condition, situation, or value

1. Evaluation
2. Learning
3. Survey
4. Techniques

2. State techniques to be used in classroom learning.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

3. Select from the list below desirable study habits. Mark an "X" by each correct answer.

_____a. List unfamiliar words and look up their definitions

_____b. Review classroom notes as soon as possible after class

_____c. Take notes while reading assignments and references

_____d. Keep snacks available on your desk

_____e. Use library for references and additional materials

_____f. Study for long periods of time

_____g. Prepare a time schedule for a specific, uninterrupted study time

_____h. Begin studying as soon as the course begins ______i. Choose a quiet, well-lit, and ventilated area in which to study

______j. Discuss what you have read with classmates

4. Arrange in order steps for using a textbook. Write a "1" before the first step, a "2" before the second, and so on.

______a. Recite

______b. Read and reflect

______c. Review

______d. Question

______e. Survey

5. Describe the process of surveying a textbook.

____

____

____

____

____

____

____

____

6. Select from the list below rules for reading a textbook. Mark an "X" by each correct answer.

______a. Underline all words

______b. Rely on one source of information

______c. Do not read to be reading; read to understand the information

______d. Concentrate on the subject matter

______e. Ask instructor for help if material is difficult for you to read

______f. Get into a reclining position to read

______g. Have snacks on hand to eat while studying

______h. Read for main ideas and important details

______i. Skip the summaries if you have already read the material

7. State points to consider when reading a textbook.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

8. Arrange in order steps to follow when researching materials. Write a "1" in front of the first step, a "2" in front of the second, and so on.

______a. Read each article and write down in outline form the information most pertinent to the topic

______b. Write down all topics that may be covered in the area that you are researching

______c. Be able to summarize the information in a more formal way, depending on the use of the material

______d. Use a library source that gives you information on where to find the topics you have listed

9. Select from the list below purposes of examinations. Write an "X" in the correct blanks.

______a. Decrease lecture time

______b. Assess knowledge or progress

______c. Decrease class size

______d. Measure performance

______e. Keep students busy

______f. Reinforce learning

______g. Evaluate teaching methods

10. Match types of examinations to the correct definitions. Write the correct numbers in the blanks.

______a. Requires student to distinguish between correct and incorrect information

______b. Shows progress in skill areas by using a checklist, observation by instructor, or observation by a skilled professional

______c. Requires recall of information (usually short-answer type) after being given partial information

1. Completion
2. True and false
3. Clinical performance

______d. Grouping of definitions or descriptions whose answers must be taken from a single list of possible answers

______e. Requires recall of information and writing a short, concise statement, paragraph, or page

______f. Asked to choose one best response from a list of three or more responses

4. Matching
5. Essay
6. Multiple choice

11. Describe ways to prepare for examinations.

____

____

____

____

____

____

12. Select from the list below points to remember when taking an exam. Mark an "X" by each correct answer.

______a. Concentrate on difficult parts of test first

______b. Read question thoroughly before writing any answer

______c. Follow directions carefully

______d. Finish as quickly as you can

______e. *Never* change your answers

______f. Answer all questions in sequence

______g. Note number of questions, value of questions, and time allowed

______h. Check to see that *all* questions have been answered

______i. If answer sheets are being used, check carefully that the number of the question matches the number of the answer

______j. Don't be the last one to finish

______k. Assign each question an appropriate percentage of total time

______l. Always try to finish first

13. Discuss methods for evaluating students' performance in classroom and clinical area.

14. State reasons a knowledge of basic math is important in nursing.

    a.

    b.

    c.

15. Practice basic math problems.

16. Practice using textbook skills.

17. Use library skills to research a health topic.

18. Evaluate study habits.

    (NOTE: If activities 15-18 have not been finished before the test, ask your instructor when they should be completed.)

TECHNIQUES OF LEARNING
UNIT II

ANSWERS TO TEST

1. a. 4
   b. 1
   c. 2
   d. 3
2. a. Have a positive attitude
   b. Build a new vocabulary
   c. Listen attentively
   d. Take notes
   e. Read assignments before class
   f. Ask questions if you do not understand
3. a, b, c, e, g, h, i, j
4. a. 4
   b. 3
   c. 5
   d. 2
   e. 1
5. Description should include:
   a. Begin survey by looking through book from front to back
   b. Read the preface to see what the author wanted to accomplish with the book
   c. Look through the table of contents to see what you will be studying
   d. Look at the pictures
   e. Notice the type of format the book uses
   f. Survey one chapter to see how the author organizes his or her material

6. c, d, e, h
7. a. Information given is one author's point of view
   b. Read everything, including charts, tables, footnotes, and graphs
   c. Coordinate what you read with what you learn in the classroom; develop a system of taking lecture notes that can be used with notes taken from texts
   d. Remember that the reason you are reading these books is to gain knowledge to be used when you begin practicing patient care skills
8. a. 3
   b. 1
   c. 4
   d. 2
9. b, d, f, g
10. a. 2
    b. 3
    c. 1
    d. 4
    e. 5
    f. 6
11. Description should include:
    a. Have a positive attitude
    b. Study regularly
    c. Follow a well-organized plan of review
    d. Write legible, well-organized notes
    e. Memorize needed facts, formulas, principles
    f. Try to RELAX and enjoy learning
12. b, c, g, h, i, k
13. Discussion should include:
    a. Participation by student in classroom and clinical area--Answers questions; enthusiastic about learning; dependable and punctual in clinical area
    b. Response of student to instruction and criticism--Student has an open and responsive mind and can accept and benefit from constructive criticism

c. Behavior of student in classroom and clinical area--Shows professionalism, initiative, an open mind, eagerness to learn

14. a. Math is used in calculating medication dosages

    b. Accuracy may mean the difference between life and death

    c. Basic math is used in many areas of the nursing profession

15. Evaluated to the satisfaction of the instructor

16. Evaluated to the satisfaction of the instructor

17. Evaluated to the satisfaction of the instructor

18. Evaluated to the satisfaction of the instructor

PARTICIPATION IN STUDENT ORGANIZATIONS
UNIT III

UNIT OBJECTIVE

After completion of this unit, the student should be able to develop skills needed to become an effective member of a student organization. The student should also be able to use parliamentary procedure correctly. This knowledge will be evidenced by completion of assignment sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with participation in student organizations to the correct definitions.
2. State reasons for belonging to a student organization.
3. Select from a list other student vocational organizations.
4. Select from a list benefits of membership in HOSA.
5. Select from a list purposes of HOSA.
6. Match dates to important Oklahoma Association of HOSA events.
7. Match dates to important HOSA events.
8. Write the HOSA motto.
9. Select from a list official HOSA colors.
10. Describe the official HOSA dress code for members.
11. Label the colors of the official HOSA emblem.
12. Match the symbols of the HOSA emblem to their meanings.
13. List the organizational levels of HOSA.
14. Match chapter officers to their duties.
15. State essentials of a good chapter.
16. Select from a list criteria for selection of voting delegates.
17. List types of chapter activities.
18. Complete a chart showing leadership training activities for HOSA.
19. Describe activities available for the student affiliate of OSALPN.

20. Match terms associated with parliamentary procedure to the correct definitions.

21. Select from a list principles upon which parliamentary procedure is based.

22. Arrange in order the proper sequence of business carried out during a HOSA meeting.

23. List characteristics of a good chairman.

24. Match proper uses of the gavel to the correct meanings.

25. Describe the proper way to introduce a motion.

26. Match the methods of voting to the correct uses.

27. Match parliamentary motions to the correct purposes.

28. Complete a chart on rules that apply to motions used in conducting a meeting.

29. State the basic rules that apply to motions used in conducting a meeting.

30. Select from a list steps that make a good meeting.

31. Recite the National HOSA creed.

32. Use the proper sequence for moving a main motion.

33. Use the proper sequence for moving the previous question.

34. Evaluate a chapter meeting.

35. Evaluate the effectiveness of parliamentary procedure.

PARTICIPATION IN STUDENT ORGANIZATIONS
UNIT III

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Obtain all needed forms to begin local chapter from the state advisor for HOSA.

      (NOTE: Forms can be obtained by writing or calling the state advisor for HOSA, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074, 405-377-2000.)

   B. Obtain information needed by students to become a student affiliate of OSALPN from the state chapter president.

   C. Obtain information on HOSA uniforms and have one ready to show to class.

   D. Provide students with objective sheet.

   E. Provide students with information and assignment sheets.

   F. Make transparency of emblem.

      (NOTE: If you do not have an official HOSA banner showing the emblem, you may order these and other official HOSA items from the HOSA Emblematic Services, Cataloging Agents, P.O. Box 1227, Gainesville, Florida 32602.)

   G. Discuss unit and specific objectives.

   H. Discuss information and assignment sheets.

   I. Invite the HOSA state advisor to speak to class.

   J. Invite the OSALPN president to speak to class and/or visit one of the district meetings with several of the students.

   K. Invite alumni members to speak to class about the benefits of being involved in HOSA.

   L. Review last year's scrapbook of activities illustrating how students can get involved, learn, achieve, and be rewarded through involvement.

   M. Develop a local slide program involving students from your school. Show the different activities offered and change it from year to year to involve current students.

   N. Make a bulletin board for the first day of school to show benefits of belonging to HOSA.

O. Visit other vocational organizations with students to observe activities.

P. Visit a civic club with two or three students and let them present information about HOSA.

Q. Set up simulated parliamentary procedure for the students to practice techniques.

(NOTE: This will be good practice for the HOSA spring conference competition.)

R. Encourage students to attend leadership training conferences and sponsor students on trips to meetings.

(NOTE: Probably the most important thing you can do is plan far enough in advance for the conferences, meetings, and national conventions that will be held during the year. Complete needed forms and begin planning with the class for their attendance at these functions. Your enthusiasm will be the key to class participation.)

S. Give test.

II. Instructional materials;

A. Objective sheet

B. Information sheet

C. Transparency master: TM 1--HOSA Emblem

D. Assignment sheets

  1. Assignment Sheet #1–Recite the National HOSA Creed
  2. Assignment Sheet #2--Use the Proper Sequence for Moving a Main Motion
  3. Assignment Sheet #3--Use the Proper Sequence for Moving the Previous Question
  4. Assignment Sheet #4--Evaluate a Chapter Meeting
  5. Assignment Sheet #5--Evaluate the Effectiveness of Parliamentary Procedure

E. Answers to assignment sheets

F. Test

G. Answers to test

III. Unit references:

A. *Oklahoma Health Occupations Student Organizations Handbook.* Stillwater: Oklahoma State Department of Vocational and Technical Education, 1974.

B. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

C. Roberts, Henry M. *Robert's Rules of Order.* rev. ed. New York: Pyramid, 1980.

IV. Films:

(NOTE: The following films are available *only* to Oklahoma teachers from the Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order films from the addresses listed below.)

A. *Mr. Chairman.* Color, 18 min., Encyclopedia Britannica, 1969. Available from Encyclopedia Britannica, 425 North Michigan Avenue, Chicago, Illinois 60601.

B. *J.J. Gets Ready.* Color, 10 min., Journal Films Incorporated, 1977. Available from Journal Films Incorporated, 930 Pitner Avenue, Evanston, Illinois 60202.

C. *J.J. Gets to His Feet.* Color, 10 min., Journal Films, 1977. Available from Journal Films Incorporated, 930 Pitner Avenue, Evanston, Illinois 60202.

(NOTE: Both of these films [B,C] would be good to prepare students for making speeches.)

PARTICIPATION IN STUDENT ORGANIZATIONS
UNIT III

INFORMATION SHEET

I. Terms associated with participation in student organizations

   A. Health Occupations Students of America (HOSA)--Student organization at the national level for students enrolled in health occupations programs

      (NOTE: The state organization is known as the Oklahoma Association of HOSA.)

   B. State HOSA advisor--Person appointed by the state supervisor and approved by executive council to advise and provide leadership for the state organization

   C. Local chapter advisor(s)--Person(s) designated by local school administration to advise and provide leadership for the local HOSA chapter

   D. Voting delegate--Student chosen to represent local chapter in balloting on questions of business or election of officers at state or national conferences

   E. Active member--Student enrolled in an approved health occupations educational program; must be member of the state organization in order to hold offices on the local, state, and national levels

      (NOTE: The two divisions of active members are secondary and full-time adult.)

   F. Alumni member--Former active member who has remained in good standing with the chapter

   G. Honorary life member--Individual who has made contributions to development of HOSA in Oklahoma and whose membership has been approved by the state executive council

      (NOTE: Alumni and honorary life members have all rights except serving as voting delegates, holding elective office, or participating in state contests.)

   H. Professional member--Person who may be associated with, or who has participated in, the development of health occupations student organizations in Oklahoma as approved by the state organization

   I. Oklahoma State Association of Licensed Practical Nurses (OSALPN)--Organization that allows practical nurses to have a voice in decisions made concerning that profession; provides for continuing education and professional improvement

      (NOTE: When you join your local association you automatically become a member of the state and national organizations.)

INFORMATION SHEET

II. Reasons for belonging to a student organization

  A. Helps develop leadership qualities

  B. Helps individual learn to work with others

  C. Encourages participation in activities other than school courses

  D. Helps student develop interest in community civic affairs

  E. Prepares student to take an active part in professional organizations after career choice is made

  F. Provides opportunity to make new friends

III. Other student vocational organizations

  A. AIASA (American Industrial Arts Student Association)

  B. DECA (Distributive Education Clubs of America)

  C. FBLA (Future Business Leaders of America)

  D. FFA (Future Farmers of America)

  E. FHA-HERO (Future Homemakers of America-Home Economics Related Occupations)

  F. VICA (Vocational Industrial Clubs of America)

IV. Benefits of membership in HOSA

  A. Provides guidance to students who seek to develop knowledge, skills, and behavioral characteristics necessary in preparing for a future in a health career

  B. Helps students gain self-confidence through the development of leadership skills and abilities

  C. Helps students associate and exchange information with other students who have the same interests

  D. Introduces students to a wide variety of health career choices

  E. Helps students develop responsibility through service to the local community

  F. Provides students with the opportunity to make realistic career choices

INFORMATION SHEET

V. Purposes of HOSA

   A. To develop programs and activities which will develop physical, mental, and social well-being of the individual and produce qualities of leadership, character, good citizenship, and respect for ethical practices

   B. To develop self-actualization of each member which will contribute to meeting the individual's psychological, social, and economic needs

   C. To build students' confidence in themselves and their work by teaching them to assume responsibilities and develop occupational competencies and social skills

   D. To promote interorganizational relationships with professional groups, businesses, industries, and other student organizations

   E. To recognize individual achievement in scholarship, occupational skills, or services rendered by providing awards

   F. To promote involvement in current health care issues, environmental concerns, and survival needs of the community, the state, the nation, and the world

   G. To promote establishment of local Oklahoma Association of HOSA

VI. Dates of important Oklahoma Association of HOSA events (Assignment Sheet #1)

   A. August, 1973--Survey of interested health occupations instructors was taken to decide if a new organization should be formed for students in health occupations programs

   B. May 30-31, 1974--Steering committee composed of teachers and state staff members was appointed and met for two days to investigate and make recommendations for the new organization; plans were made for the first chapters to be formed in September

   C. Fall, 1974--Meeting was held to elect state officers for the new health occupations student organization; officers were later installed and a name, colors, motto, creed, and emblem were selected

   D. April, 1975--First state conference was held in Tulsa, Oklahoma, for leadership training and skills contests

   E. Spring, 1976--Conference held in Tulsa, Oklahoma; included new adult chapters from practical nursing programs

   F. Fall, 1976--Conference held in Oklahoma City, Oklahoma; adult and secondary officers were elected and installed

INFORMATION SHEET

VII. Dates of important HOSA events

  A. November, 1975--Oklahoma was one of six original charter states involved in the organization of a national health occupations education student organization in Cherry Hill, New Jersey

  B. November, 1976--American Health Occupations Education Student Organization Constitutional Convention was held in Arlington, Texas; national by-laws were adopted and national officers were elected and installed; colors and the name, Health Occupations Students of America, were adopted

  C. April, 1978--First annual convention of HOSA was held in Oklahoma City, Oklahoma to select national uniform, motto, and emblem; to provide leadership training; and to involve students in skills contests

VIII. HOSA motto--The hands of HOSA mold the health of tomorrow

IX. Official HOSA colors

  A. Hospital white

  B. Navy blue

  C. Maroon accent

X. Official HOSA dress code for members

  A. Navy blue blazer

  B. White or navy blue pants or skirt

  C. Maroon scarf or tie with white HOSA imprint

  D. Plain, tailored white shirt with winged collar

XI. Colors of the official HOSA emblem (Transparency 1)

  A. Background, Health Occupations Students of America, HOSA, hands, and figure--White

  B. Triangle and Founded 1976--Blue

  C. Outer band--Maroon

XII. Symbols of the HOSA emblem

  A. Circle--Continuity of health care

  B. Triangle--Three aspects of a person's well-being: social, physical, and mental

  C. Hands--Represent "caring" and "active" HOSA students

  D. Person--All of mankind

INFORMATION SHEET

XIII. Organizational levels of HOSA

A. Local chapters

(NOTE: Finances needed to operate the local chapters will depend upon programs planned for the year.)

B. Oklahoma Association of HOSA

(NOTE: State organization finances are provided through assessments from members.)

C. National HOSA

(NOTE: National organization finances are provided through yearly assessments.)

XIV. Chapter officers and their duties

A. President--Presides over all chapter meetings; serves as ex officio member on all committee meetings; coordinates and supervises all efforts of chapter officers and committees

B. Vice-president--Assists the president; presides over chapter activities in the absence of the president; serves as chairman of program committee

C. Secretary--Prepares and reads minutes of all chapter meetings; maintains membership list and record of attendance; answers all chapter correspondence promptly; counts and records all votes; reads all communications at meetings; prepares an agenda for meetings

D. Treasurer--Keeps financial records of the chapter

E. Sentinel--Sets up and secures meeting rooms; attends the door during meetings and greets visitors; makes sure meeting room is comfortable; secures the meeting without interruption

F. Parliamentarian--Informs all members on correct parliamentary procedures

G. Reporter--Prepares news releases regarding HOSA activities for all media

H. Historian--Gathers and assembles all materials in preparation for the chapter scrapbook

I. Chaplain--Takes charge of all religious activities during chapter meetings and other functions

J. Member-at-large--Serves in advisory capacity; an alumni member

INFORMATION SHEET

XV. Essentials of a good chapter

- A. Capable officers and leaders
- B. Responsibility for chapter activities shared by all members
- C. Challenging program of activities
- D. Proper recordkeeping
- E. Well-planned, regularly held chapter meetings
- F. Support from school officials and community leaders
- G. Active member participation in chapter activities

XVI. Criteria for selection of voting delegates

- A. Active participation in all chapter meetings and assigned committees

  (NOTE: This person should demonstrate leadership abilities.)

- B. Successful achievement in classroom assignments and laboratory activities while maintaining achievement in other school subjects

  (NOTE: Each chapter is entitled to be represented by two voting delegates.)

XVII. Types of chapter activities

(NOTE: Activities promote growth of individual members; improve school, home, and community; and serve as showcases for the local chapter, the national organization, and vocational education.)

- A. Professional activities

  Examples: Guest speakers, vocational-related films, chapter field trips, special recognition banquets, state and national conferences, and competitive events

- B. Civic activities

  Examples: Benefits for March of Dimes, Heart Fund, Community Chest, Red Cross, or other service agencies; booths and exhibits at state fairs; assisting community officials with health projects

- C. Service activities

  Examples: Thanksgiving or Christmas food baskets for people in need; involvement with senior citizen groups

INFORMATION SHEET

D. Social activities

Examples: Get-togethers for prospective members, reception for faculty members, and chapter picnics or dances

E. Fund-raising activities

Examples: Sales projects, car washes, bake sales, dinners

(NOTE: Local chapters can finance their group through fund-raising events but these must be approved by the school administration.)

XVIII. Leadership training activities for HOSA

MEETINGS	ACTIVITIES AND PARTICIPANTS
A. Vocational Leadership Institute (STATE) (NOTE: Since HOSA does not elect its state officers until fall, each chapter advisor is asked to submit names of potenial leaders in HOSA--students who will be members of a HOSA chapter next year and would be willing to run for office.)	Each summer state officers of vocational student organizations attend a meeting that provides leadership training (NOTE: This meeting includes members from AIASA, DECA, FBLA, FFA, FHA-HERO, and VICA.)
B. Fall HOSA Leadership Conference (STATE)	All members of Oklahoma Association of HOSA can participate; leadership training for local chapter officers is provided; elections of secondary and full-time officers are held
C. Spring HOSA Leadership Conference (STATE)	All members of Oklahoma Association of HOSA can participate; all members are provided with leadership training; provides competitive events and leadership-scholarship skills
D. National HOSA Convention	Each spring all members of HOSA can participate in competitive events and leadership-scholarship skills; election of national officers is held

INFORMATION SHEET

XIX. Activities available for the student affiliate of OSALPN

A. State convention in the fall

1. Student Day provides an opportunity for student affiliates to be a part of the OSALPN

2. Several contests are held that day for students

Examples: Poster, essay, and student of the year

(NOTE: Cash awards are given for these contests.)

B. Student can attend division meetings, be a voting member, and also serve on the executive boards as a director

(NOTE: Students can also be actively involved in legislative processes.)

C. Student affiliate receives the *OSALPN Newsletter* and the national magazine, *Nursing Care,* as a paid member of organization

D. Upon graduation and after state boards are taken, student may pay dues and become a full member

XX. Terms associated with parliamentary procedure

A. Parliamentary procedure--Set of rules for conducting a meeting in an organized and efficient manner

(NOTE: Knowledge of these techniques is essential to leadership development and vital to success of any organization. The official handbook for parliamentary procedure is the newly revised *Robert's Rules of Order.*)

B. Motion--Proposal that something be done; method of bringing a question before the assembly for consideration

C. Main motion--Introduces business or brings a question directly before the assembly

(NOTE: A main motion is introduced by saying, "I move. . . ." Only one main motion can be considered at a time.)

D. Subsidiary motion--Modifies or disposes of main motion; must be voted upon before vote is taken on main action

Example: Amendment

INFORMATION SHEET

E. Privileged motion--Motion that has no connection with main motion and outranks other motions

Examples: Fixing time of next meeting, adjourning, calling for question of privilege, or calling for order of the day

F. Incidental motion--Motion that arises or relates to procedure and may not refer directly to the main question

Examples: Nominations and elections, objection to consideration, or points of order

G. Opening ceremony--Set, formal routine that is used at the beginning of each meeting

H. Closing ceremony--Set, formal routine that is used at the end of each meeting

I. Sequence--To arrange in order

J. Quorum--Number of members needed to be present in order for official business to be transacted

(NOTE: Unless otherwise stated in a chapter consititution, half or more of the active membership constitutes a quorum.)

K. Simple majority--More than half of legal votes cast

L. Two-thirds majority--More than 2/3 of legal votes cast

(NOTE: When a motion will limit the rights of a member or members, a 2/3 majority is required.)

M. Putting the question--Taking the vote

N. Out of order--Incorrect parliamentary procedure

O. Second--Required for many motions to make sure that at least two of the members are interested

P. Debate or discussion--Making remarks relevant to the question

XXI. Principles upon which parliamentary procedure is based

A. Justice and courtesy for all

B. Majority rule

C. Right of the minority to be heard

D. Protection of the rights of the individual

INFORMATION SHEET

E. Consideration of one thing at a time

F. Maintenance of order

G. Expedition of business

XXII. Proper sequence of business carried out during a HOSA meeting (Assignment Sheets #4 and #5)

A. Opening ceremony

B. Reading and approval of minutes of previous meeting

C. Committee reports

D. Unfinished business

E. New business

F. Program

G. Closing ceremony

H. Entertainment and/or recreation

XXIII. Characteristics of a good chairman

(NOTE: There is some use of the terms "chairperson" and "chairwoman" to recognize that many women hold positions of leadership. However, according to the National Association of Parliamentarians, the term "chairman" or "madame chairman" will continue to be used to mean the person who is in the chair. The term "madame chairman" is appropriate when a female is in the leadership position.)

A. Willingness to work

B. Self-confidence

C. Well-developed voice

D. Neat appearance

E. Ability to make fair and impartial judgments

XXIV. Proper uses of the gavel and their meanings

A. Two taps--Call the meeting to order

B. Three taps--Signal for all members to stand

C. One tap--Signal to be seated

D. One tap following the announcement--Main motion has been passed or rejected

INFORMATION SHEET

E. One tap following the announcement--Meeting is adjourned

F. Sharp tap or series of sharp taps--Maintain order during meetings

(NOTE: A good meeting should have dignity and order. It is the responsibility of the president to maintain complete order. Members should visit outside the meeting. Talking is done only by proper recognition from the president.)

XXV. Proper way to introduce a motion

A. Have only one main motion on the floor at a time

B. Receive recognition by the chair before speaking

Example: Raise hand, stand up

C. Stand and address the chair as "Mr. Chairman" or "Madame Chairman"

D. Say, "I move . . ."

(NOTE: Do not say, "I make a motion . . ." or "I move that . . .")

E. Word all motions in a positive way so that a "yes" vote means the membership is in favor of the proposed motion

Example: Discussion is that the chapter sell popcorn at basketball games.

Motion worded in positive way: I move we sell . . .

Motion worded in a negative way: I move we do not sell . . .

XXVI. Methods of voting

A. Voice vote--Used most often on main motions requiring a simple majority vote

Example: By saying "Aye" or "No"

B. Rising vote--Needed to verify a 2/3 majority vote or when division of the assembly has been called for

Example: Either by standing or by a show of hands

C. Secret ballot--Written ballot

Example: Used many times in officers' elections

INFORMATION SHEET

XXVII. Purposes of parliamentary motions

A. Lay on the table--Temporarily delays the consideration of an item of business

(NOTE: The motion "lay on the table" permits members to make further investigations in regard to the question being considered, permits consideration of more urgent business, and delays action to motion until the chapter decides to take the motion from the table. If a motion is tabled, all pending amendments and other motions adhering to it are also tabled.)

B. Previous question--Stops debate on the motion or motions before the chapter and secures a vote immediately

(NOTE: The previous question applies only to the question immediately pending if unqualified and applies to successive pending questions if qualified.)

Example: If a main motion and an amendment are pending and the previous question carried, it applies only to the amendment. If the previous question is qualified to include everything before the chapter and is carried, it is necessary to vote at once on the amendment and the main motion in that order

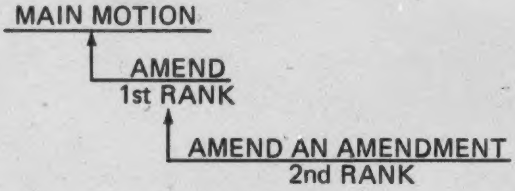
C. Refer to committee--Allows a smaller, select group to study the question and report back to the chapter its findings of a study or the accomplishment of an assigned task

(NOTE: The motion "refer to committee" allows securing more detailed information relevant to the item of business, ensures privacy when considering a delicate matter, secures recommendations from a smaller group, and permits a more informal consideration of a motion.)

D. Amend--Change the motion or resolution that is being considered to a more satisfactory form

(NOTE: The amendment must be related to the subject of the motion. It applies to the original motion if it is of the first rank and applies to the amendment if it is of the second rank [amendment to the amendment]. There are only two kinds of amendments: first rank and second rank. See the example below. An amendment is of the first rank. An amendment to the amendment is of the second rank and cannot be amended. A motion may be amended by adding or inserting words, striking out words, or by striking out and inserting words.)

Example:



INFORMATION SHEET

E. Postpone indefinitely--Suppresses the question before the assembly without bringing the matter to a vote

(NOTE: If postpone indefinitely carries, the main motion is suppressed for the current meeting or convention. A main motion that is postponed indefinitely can be brought up at a later meeting only by proposing it as a new motion. Sometimes postpone indefinitely is made by opponents of the main motion to learn who is favoring and who is opposing the main motion.)

F. Point of order--Calls attention to a violation of the rules or to a mistake in procedure

G. Appeal from the decision of the chair--Obtains a decision from the chapter to the question on which the president has just rendered a decision

(NOTE: An appeal from the decision of the chair permits the chapter to review the decisions of the president and is made only in regard to the decision which the president has made. An announcement of a vote or an answer to a parliamentary inquiry is not a decision.)

Examples: Member feels that he or she asked for the floor first but the president rendered the floor to another member; member feels a mistake has been made by the president in rendering a decision relevant to a point of order

H. Suspend the rules--Allows a chapter to take action which it is prevented from taking because of certain parliamentary rules, a previously adopted chapter program, or the standing rules of the chapter

(NOTE: Rules may be suspended only for a limited time and only for a limited purpose.)

I. Division of the assembly--Secures an accurate vote especially when the vote has been taken by voice or by show of hands

(NOTE: Any member has the right to request a division of the assembly. Division of assembly automatically calls for a standing vote or ballot. It must be called for before another motion has been stated.)

J. Nomination--Presents to the chapter the name of a candidate for the office to be filled

(NOTE: Nominations may be made by a member from the floor or may be made by a nominating committee.)

K. Parliamentary inquiry--Obtain information from the presiding officer concerning some question related to the pending question and proper procedure

INFORMATION SHEET

L. Leave to withdraw a motion--Permits the proposer of a motion to remove it from consideration

(NOTE: A proposer may modify or withdraw at her or his pleasure before the motion has been stated to the chapter. The proposer may not withdraw the motion after it has been stated without the consent of the chapter. If consent is not unanimous, the chair must put the question on granting the request or a motion may be made to grant it.)

M. Adjourn--Formally closes a chapter meeting

(NOTE: It is a privileged motion when unqualified.)

N. Question of privilege--Permits a member to secure immediate action upon a matter that concerns the right and comfort of the members, another individual, or him- or herself

(NOTE: A member may request, but not demand, the granting of the privilege. These may relate to such things as ventilation, heating, conduct of officers, or the control of noise.)

O. Take from the table--Permits further consideration of a tabled motion

(NOTE: In order to offer a motion to take from the table, some business must have been transacted since the tabling of the motion. When the motion to take from the table carries, the original motion is before the chapter in exactly the same situation. A tabled motion must be taken from the table at the meeting during which it was tabled or at the next regular meeting.)

P. Reconsider--Permits the chapter to rescind the vote previously taken on a motion and to again consider the items of business

(NOTE: To move to reconsider, the member must have voted on the prevailing side. Any member may second the motion. Motion must be made on the day the vote was taken or the next calendar day.)

INFORMATION SHEET

XXVIII. Chart of rules that apply to motions used in conducting a meeting (Assignment Sheets #2 and #3)

MOTIONS		MAY INTERRUPT SPEAKER	REQUIRED SECOND	DEBATABLE	VOTE REQUIRED	MOTION THAT MAY APPLY
A.	Privileged					
1.	To fix time	No	Yes	Limited	Maj.	Amend, Reconsider
2.	To adjourn	No	Yes	No	Maj.	None
3.	To take a recess	No	Yes	Limited	Maj.	Amend
4.	Question of privilege	Yes	No	No	Chmn. rules	All
5.	Call for order of day	Yes	No	No	None	None
B.	Incidental					
1.	Point of order	Yes	No	No or Maj.	Chmn. rules	None
2.	Appeal	Yes	Yes	Yes	Maj.	All except amend
3.	Suspend rules	No	Yes	No	2/3	None
4.	Withdraw a motion	No	No	No	Maj.	Reconsider
5.	Parliamentary inquiry	Yes	No	No or Maj.	Chmn. rules	None
6.	Object to consider	Yes	No	No	2/3	All
7.	Call for division of the house	Yes	No	No	Maj.	All
8.	Call for division of question	No	Yes	No	Maj.	All
C.	Subsidiary					
1.	Lay on table	No	Yes	No	Maj.	None
2.	Previous question	No	Yes	No	2/3	Reconsider
3.	Refer to committee	No	Yes	Yes	Maj.	Amend, Recon., Prev. Ques.
4.	Amend	No	Yes	Yes	Maj.	Amend, Recon., Prev. Ques.
5.	Postpone indefinitely	No	Yes	Yes	Maj.	Lim. Deb., Prev. Ques., Recon.

INFORMATION SHEET

MOTIONS	MAY INTERRUPT SPEAKER	REQUIRED SECOND	DEBATABLE	VOTE REQUIRED	MOTION THAT MAY APPLY
D. Main Motions					
1. General main motion	No	Yes	Yes	Maj.	All
2. Specific main motion					
a. To take from table	No	Yes	No	Maj.	None
b. To reconsider	Yes	Yes	Yes	Maj.	Lim. Deb., Prev. Ques. Table
c. To adopt a resolution	No	Yes	Yes	Maj.	All
d. To adjourn	No	Yes	Limited	Maj.	Amend, Reconsider
e. To create order of day	No	Yes	Yes	Gen.--Maj. Spec.--2/3	All
f. To amend	No	Yes	Yes	Maj.	Amend, Recon., Prev. Ques., Lim. Deb.

INFORMATION SHEET

XXIX. Basic rules that apply to motions used in conducting a meeting

A. Motion of higher precedence may be proposed when a motion is pending

(NOTE: A motion of lower precedence may not be proposed.)

B. Motions are considered and voted upon in reverse order to their proposal

XXX. Steps that make a good meeting

A. Advanced planning and practice by the executive committee

(NOTE: It is suggested that an agenda be prepared ahead of time.)

B. Preparing written and oral committee's, secretary's, and treasurer's reports

C. Arranging the seating plan so everyone can see the program

D. Giving the guest speaker some indication of the topic desired and length of the speech

E. Having an official greeter to make everyone feel welcome and to prevent interruptions of serious portions of the meeting

Example: Members entering late may wait until after the devotional and flag salute to be seated

F. Proceeding according to the order of business

G. Proceeding with minimum participation by the advisor(s)

H. Beginning and ending on time

I. Involving all members in at least one committee

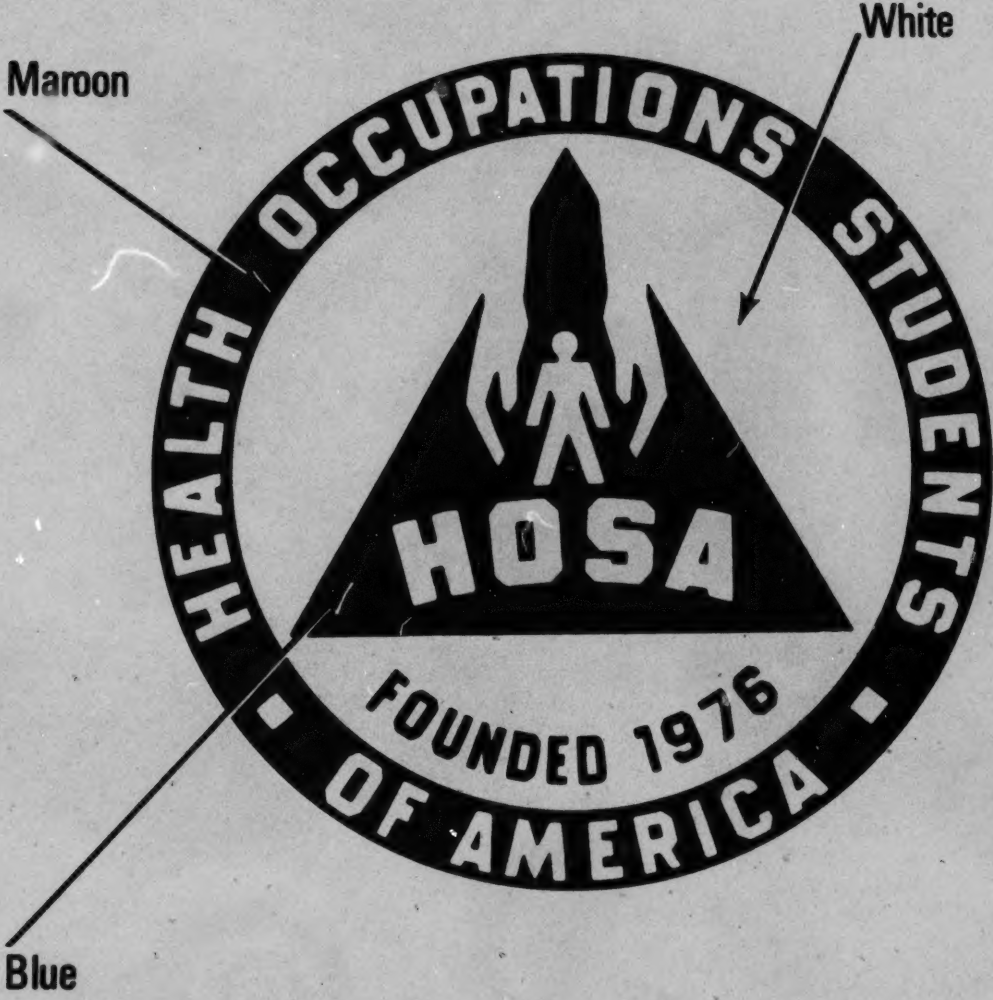
J. Conducting business according to parliamentary procedure

K. Moving along with "snap" to prevent boredom and wasted time

L. All members expressing appreciation to guests for their attendance

M. Helping with any clean-up duties

HOSA Emblem


Maroon
White
HEALTH OCCUPATIONS STUDENTS OF AMERICA
HOSA
FOUNDED 1976
Blue

PARTICIPATION IN STUDENT ORGANIZATIONS
UNIT III

ASSIGNMENT SHEET #1--RECITE THE NATIONAL HOSA CREED

NAME________________________________ SCORE ____________

Read each paragraph carefully and try to memorize it. Then move on to the next paragraph until each one is memorized. Practice by saying the creed with a classmate and be able to recite it to the satisfaction of the instructor.

I BELIEVE in the Health Care profession.

I BELIEVE in the profession for which I am being trained; and in the opportunities which my training offers.

I BELIEVE in education.

I BELIEVE that through education I will be able to make the greatest use of my skills, knowledge, and experience in order to become a contributing member of the health care team of my community.

I BELIEVE in myself.

I BELIEVE that by using the knowledge and skills of my profession I will become more aware of myself. Through fulfilling these goals I will become a more responsible citizen.

I BELIEVE that each individual is important in his or her own right; therefore, I will treat each person with respect and love.

To this end, I dedicate my training, my skills and myself to serve others through HEALTH OCCUPATIONS STUDENTS OF AMERICA.

PARTICIPATION IN STUDENT ORGANIZATIONS
UNIT III

ASSIGNMENT SHEET #2--USE THE PROPER SEQUENCE FOR MOVING A MAIN MOTION

NAME________________________________ SCORE ________________

PART I

Members should be assigned to roleplay the following sequence. During completion of the assignment sheet, each member should have the opportunity to serve as chairman. This will give each member the opportunity to receive and dispose of an item of business in the form of a main motion.

President: Is there any other business to be presented at this time?

Member 1: (Rises) Mr./Madame Chairman.

President: Member 1.

Member 1: I move . . .

Member 2: (Rises) Mr./Madame Chairman, I second the motion.

President: The motion before the chapter is. . . . This motion can be debated and amended. It requires a majority vote. It is now open for discussion. (Discussion)

President: Are you ready for the question? Those supporting the motion that . . . say 'Aye.' Those opposing, say 'no.' The 'Ayes/No's' have it and the motion is carried/lost.

(NOTE: Rap gavel once.)

PART II

After the roleplays are completed, answer the following questions.

As president, what would you do if:

1. A member introduced the motion by stating, "I make a motion . . ."?____________

____

____

2. A member rose, addressed the chair, and made a motion before you recognized him or her? ________________________________

____

____

ASSIGNMENT SHEET #2

3. A main motion was properly made but received no second?____________________

____

____

____

4. You wished to find out whether members were ready to vote on the pending question?

____

____

____

5. You had just completed counting the votes and a member, after obtaining the floor, began discussing the motion just voted on?______________________________

____

____

6. A member began debating a motion before you had stated the motion was open for discussion?____

____

____

PARTICIPATION IN STUDENT ORGANIZATIONS
UNIT III

ASSIGNMENT SHEET #3--USE THE PROPER SEQUENCE FOR MOVING THE PREVIOUS QUESTION

NAME ______________________________ SCORE ______________

PART I

Members should be assigned to roleplay the following sequence. During the completion of the assignment sheet each member should have the opportunity to serve as chairman. This will give each member the opportunity to receive and dispose of the previous question. For the purpose of practice, ask that an item of business be presented in the form of a main motion. During the discussion of this motion a member may obtain the floor and state:

Member 1: (Rises) Mr./Madame Chairman, I move the previous question.

Member 2: (Rises) Mr./Madame Chairman, I second the motion.

President: The previous question is called for. This motion cannot be amended or debated and requires a two-thirds vote. Mr./Madame Secretary will you assist me in counting? Those supporting the motion please rise. (Pause to count.) Be seated. Those opposing the motion please rise. (Pause to count.) Be seated. Mr./Madame Secretary, what was the vote?

Secretary: The vote is affirmative, eight; negative, four.

President: There being a two-thirds in the affirmative, the motion is carried. (Rap the gavel once.) Therefore, we will vote immediately on the main motion.

(NOTE: If a main motion and an amendment are before the chapter, the previous question may be moved on all pending questions.)

PART II

After the roleplays are completed, answer the following questions.

1. What is the purpose of calling for the previous question? ____________________

____

____

____

ASSIGNMENT SHEET #3

As presiding officer, what would you do if:

2. The vote on the previous question was a majority vote but not a two-thirds vote? ______________________________
____
____

3. A member offered an amendment to the previous question? ______________________________
____
____

4. No second was offered to the previous question? ______________________________
____
____

PARTICIPATION IN STUDENT ORGANIZATIONS
UNIT III

ASSIGNMENT SHEET #4--EVALUATE A CHAPTER MEETING

NAME ____________________ SCORE ____________

Take notes at the next chapter meeting and record your findings below.

1. Did meeting follow the sequence of business as given in information sheet?

2. What topics were discussed?

3. Was parliamentary procedure followed correctly? ____________

4. How many people were involved in the discussion? ____________

5. Where was meeting held and how many people attended? ____________

6. What decisions were made during the meeting?

7. Was a guest speaker involved and what was his or her topic?

8. Did you make a motion and, if so, what type of motion?

ASSIGNMENT SHEET #4

9. Was the meeting organized?________________________________

Did the chairman handle the items for discussion well? ____________________

____

PARTICIPATION IN STUDENT ORGANIZATIONS
UNIT III

ASSIGNMENT SHEET #5--EVALUATE THE EFFECTIVENESS OF PARLIAMENTARY PROCEDURE

NAME ______________________________ SCORE ______________

Using a topic given to you by the instructor, hold a meeting and use parliamentary procedure correctly. This activity may be used to practice for the competition for the HOSA skills contest. After the meeting is closed, evaluate the effectiveness of parliamentary procedure by answering the following questions.

1. Outline the order of business for the meeting.

____

____

____

____

____

____

2. Did the order of business follow the proper sequence? ______________________

3. How many people participated in the meeting? ______________________

4. How many motions were made? ______________________

5. Name the motions made.

____

____

____

____

6. Were any amendments made? ______________________

7. Name the amendments made.

____

____

____

____

PARTICIPATION IN STUDENT ORGANIZATIONS
UNIT III

ANSWERS TO ASSIGNMENT SHEETS

Assignment Sheet #2

PART II

1. The chairman would call the member out of order and ask the member to restate the motion.
2. The chairman would call the member out of order and inform the member to receive recognition before addressing the chair.
3. The chairman would call for a second three times; then if no member seconded the motion, the chairman would state,"The motion dies for the lack of a second." Rap the gavel once.
4. The chairman would state, "Are you ready for the question?" If the chairman received no further debate after asking three times, then the chairman would proceed to vote on the pending question.
5. The chairman would call the member out of order and inform the member that there is no motion before the chapter.
6. The chairman would call the member out of order since the motion is not open for discussion.

Assignment Sheet #3

PART II

1. Stops debate on the motion or motions before the chapter and secures a vote immediately.
2. The previous question fails for a lack of a two-thirds majority.
3. The member is out of order because the previous question is not amendable.
4. The previous question fails for a lack of a second motion.

PARTICIPATION IN STUDENT ORGANIZATIONS
UNIT III

TEST

NAME ______________________________ SCORE ______________

1. Match terms associated with participation in student organizations to the correct definitions. Write the correct numbers in the blanks.

______ a. Student organization at the national level for students enrolled in health occupations programs

______ b. Person appointed by the state supervisor and approved by executive council to advise and provide leadership for the state organization

______ c. Person(s) designated by local school administration to advise and provide leadership for the local HOSA chapter

______ d. Student chosen to represent local chapter in balloting on questions of business or election of officers at state or national conferences

______ e. Student enrolled in an approved health occupations educational program; must be member of the state organization in order to hold offices on the local, state, and national levels

______ f. Former active member who has remained in good standing with the chapter

______ g. Individual who has made contributions to development of HOSA in Oklahoma and whose membership has been approved by the state executive council

______ h. Person who may be associated with, or who has participated in, the development of health occupations student organizations in Oklahoma as approved by the state organization

______ i. Organization that allows practical nurses to have a voice in decisions made concerning that profession; provides for continuing education and professional improvement

1. Professional member
2. Local chapter advisor(s)
3. Health Occupations Students of America (HOSA)
4. Active member
5. Oklahoma State Association of Licensed Practical Nurses (OSALPN)
6. State HOSA advisor
7. Voting delegate
8. Honorary life member
9. Alumni member

2. State reasons for belonging to a student organization.

   a. ______________________________

   b. ______________________________

   c. ______________________________

   d. ______________________________

   e. ______________________________

   f. ______________________________

3. Select from the following list other student vocational organizations. Write an "X" in the correct blanks.

   _____a. DECA

   _____b. FFA

   _____c. WHO

   _____d. FHA-HERO

   _____e. ANA

   _____f. VICA

   _____g. FBLA

   _____h. HOE

   _____i. AIASA

4. Select from the following list benefits of membership in HOSA. Write an "X" in the correct blanks.

   _____a. Provides students with the opportunity to make realistic career choices

   _____b. Provides opportunity for students to be excused from other classes

   _____c. Helps students associate and exchange information with other students who have the same interests

   _____d. Helps students gain self-confidence through the development of leadership skills and abilities

   _____e. Helps students develop responsibility through service to the local community

   _____f. Allows officers to have special privileges

   _____g. Provides guidance to students who seek to develop knowledge, skills, and behavioral characteristics necessary in preparing for a future in a health career ______h. Assures students of earning a better grade

______i. Introduces students to a wide variety of health career choices

5. Select from the following list purposes of HOSA. Write an "X" in the correct blanks.

______a. To guarantee employment for all

______b. To promote establishment of local Oklahoma Association of HOSA

______c. To provide opportunity to compete with other student vocational organizations

______d. To promote involvement in current health care issues, environmental concerns, and survival needs of the community, the state, the nation, and the world

______e. To recognize individual achievement in scholarship, occupational skills, or services rendered by providing awards

______f. To promote interorganizational relationships with professional groups, businesses, industries, and other student organizations

______g. To give students a break from class routine

______h. To build students' confidence in themselves and their work by teaching them to assume responsibilities and develop occupational competencies and social skills

______i. To develop self-actualization of each member which will contribute to meeting the individual's psychological, social, and economic needs

______j. To develop programs and activities which will develop physical, mental, and social well-being of the individual and produce qualities of leadership, character, good citizenship, and respect for ethical practices

6. Match dates to important Oklahoma Association of HOSA events. Write the correct numbers in the blanks. Definitions are continued on the next page.

______a. Conference held in Tulsa, Oklahoma; included new adult chapters from the practical nursing programs

______b. Steering committee composed of teachers and state staff members was appointed and met for two days to investigate and make recommendations for the new organization; plans were made for the first chapters to be formed in September

______c. First state conference was held in Tulsa, Oklahoma; for leadership training and skills contests

1. August, 1973
2. May 30-31, 1974
3. Fall, 1974
4. April, 1975
5. Spring, 1976
6. Fall, 1976

_____d. Conference held in Oklahoma City, Oklahoma; adult and secondary officers were elected and installed

_____e. Survey of interested health occupations instructors was taken to decide if a new organization should be formed for students in health occupations programs

_____f. Meeting was held to elect state officers for the new health occupations student organization; officers were later installed and a name, colors, motto, creed, and emblem were selected

7. Match dates to important HOSA events. Write the correct numbers in the blanks.

_____a. American Health Occupations Education Student Organization Constitutional Convention was held in Arlington, Texas; national by-laws were adopted and national officers were elected and installed; colors and the name, Health Occupations Students of America, were adopted

b. First annual convention of HOSA was held in Oklahoma City, Oklahoma to select national uniform, motto, and emblem; to provide leadership training; and to involve students in skills contests

_____c. Oklahoma was one of six original charter states involved in the organization of a national health occupations education student organization in Cherry Hill, New Jersey

1. November, 1975
2. November, 1976
3. April, 1978

8. Write the HOSA motto.

____

____

9. Select from the following list official HOSA colors. Write an "X" in the correct blanks.

_____a. Maroon accent

_____b. Gold

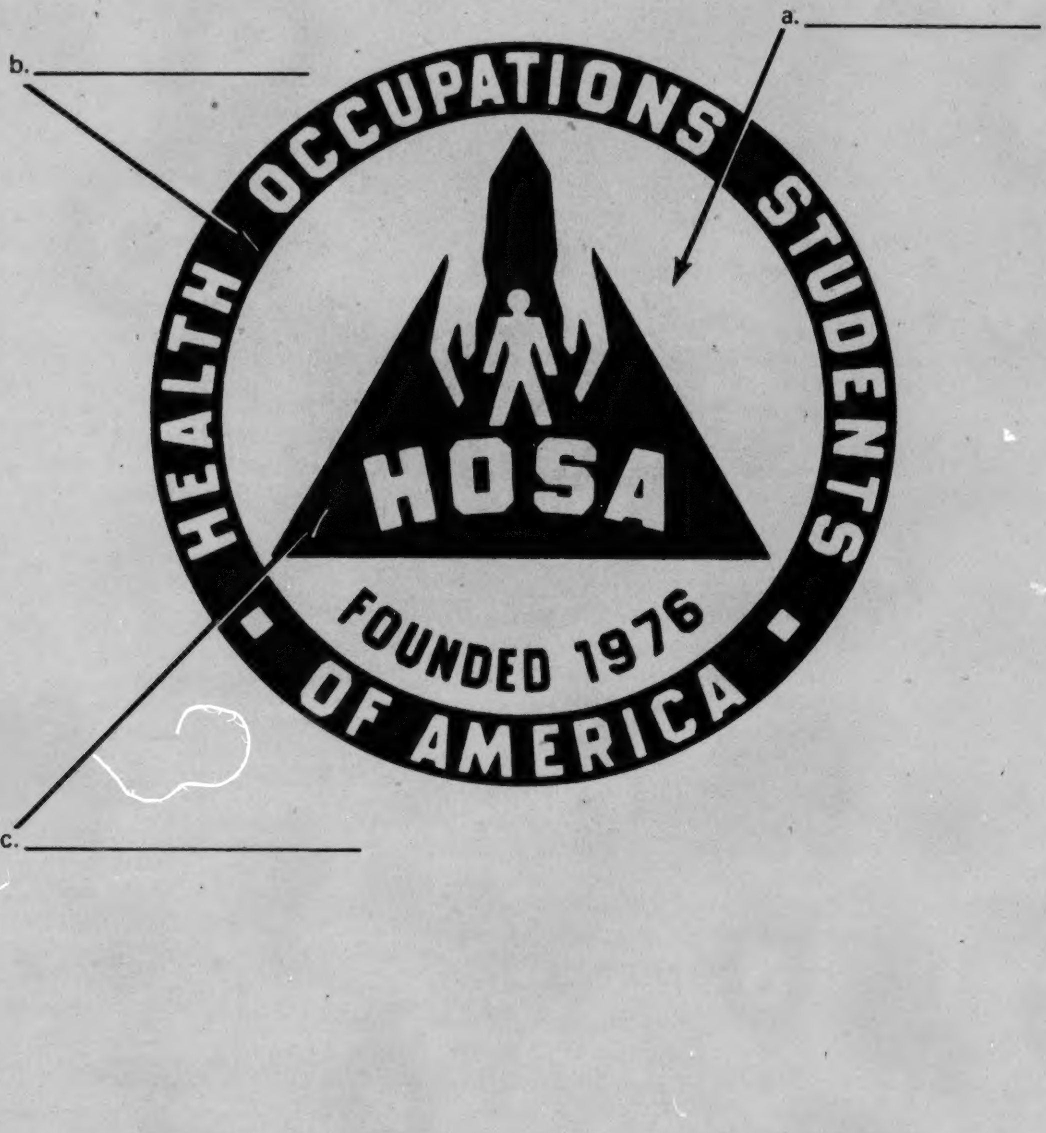
_____c. Navy blue

_____d. Hospital white

_____e. Kelly green

10. Describe the official HOSA dress code for members.

11. Label the colors of the official HOSA emblem below.


a.
b.
HEALTH OCCUPATIONS STUDENTS OF AMERICA
HOSA
FOUNDED 1976
c.

12. Match the symbols of the HOSA emblem to their meanings. Write the correct numbers in the blanks.

_____a. Three aspects of a person's well-being: social, physical, and mental

_____b. All of mankind

_____c. Continuity of health care

_____d. Represent "caring" and "active" HOSA students

1. Triangle
2. Person
3. Circle
4. Hands

13. List the organizational levels of HOSA.

a. ______________________________

b. ______________________________

c. ______________________________

14. Match chapter officers to their duties. Write the correct numbers in the blanks. Definitions are continued on the next page.

_____a. Prepares and reads minutes of all chapter meetings; maintains membership list and record of attendance; answers all chapter correspondence promptly; counts and records all votes; reads all communications at meetings; prepares an agenda for meetings

_____b. Informs all members on correct parliamentary procedures

_____c. Presides over all chapter meetings; serves as ex officio member on all committee meetings; coordinates and supervises all efforts of chapter officers and committees

_____d. Gathers and assembles all materials in preparation for the chapter scrapbook

_____e. Takes charge of all religious activities during chapter meetings and other functions

_____f. Prepares news releases regarding HOSA activities for all media

_____g. Assists the president; presides over chapter activities in absence of the president; serves as chairman of program committee

1. Historian
2. President
3. Chaplain
4. Parliamentarian
5. Secretary
6. Vice-president
7. Sentinel
8. Reporter
9. Treasurer
10. Member-at-large

______ h. Keeps financial records of the chapter

______ i. Sets up and secures meeting rooms; attends the door during meetings and greets visitors; makes sure meeting room is comfortable; secures the meeting without interruption

______ j. Serves in advisory capacity; an alumni member

15. State four essentials of a good chapter.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

16. Select from the following list criteria for selection of voting delegates. Write an "X" in the correct blanks.

______ a. High academic standing

______ b. Successful achievement in classroom assignments and laboratory activities while maintaining achievement in other school subjects

______ c. Active participation in all chapter meetings and assigned committees

______ d. Popular vote

17. List types of chapter activities.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

18. Complete the following chart showing leadership training activities for HOSA.

MEETINGS	ACTIVITIES AND PARTICIPANTS
Spring HOSA Leadership Conference (STATE)	a. ______________________

b. ____________	Each spring all members of HOSA can participate in competitive events and leadership-scholarship skills; election of national officers is held
Fall HOSA Leadership Conference (STATE)	c. ____________
d. ____________	Each summer state officers of vocational student organizations attend a meeting that provides leadership training

19. Describe activities available for the student affiliate of OSALPN.

____

____

____

____

____

____

____

20. Match terms associated with parliamentary procedure to the correct definitions. Write the correct numbers in the blanks.

_____a. Modifies or disposes of main motion; must be voted upon before vote is taken on main action

_____b. Set of rules for conducting a meeting in an organized and efficient manner

_____c. Proposal that something be done; method of bringing a question before the assembly for consideration

_____d. Introduces business or brings a question directly before the assembly

_____e. Motion that has no connection with main motion and outranks other motions

_____f. Motion that arises or relates to procedure and may not refer directly to the main question

1. Motion
2. Incidental motion
3. Privileged motion
4. Main motion
5. Parliamentary procedure
6. Subsidiary motion

______g. Set, formal routine that is used at the beginning of each meeting

______h. Set, formal routine that is used at the end of each meeting

______i. To arrange in order

______j. Number of members needed to be present in order for official business to be transacted

______k. More than half of legal votes cast

______l. More than 2/3 of legal votes cast

______m. Taking the vote

______n. Incorrect parliamentary procedure

______o. Required for many motions to make sure that at least two of the members are interested

______p. Making remarks relevant to the question

7. Closing ceremony
8. Out of order
9. Debate or discussion
10. Two-thirds majority
11. Putting the question
12. Sequence
13. Opening ceremony
14. Second
15. Simple majority
16. Quorum

21. Select from the following list principles upon which parliamentary procedure is based. Write an "X" in the correct blanks.

______a. Majority rule

______b. Maintenance of order

______c. Suppression of minority

______d. Consideration of one thing at a time

______e. Power to control by manipulation

______f. Unlimited decision making by the chairman

______g. Right of the minority to be heard

______h. Justice and courtesy for all

______i. Unlimited power of state advisor

______j. Protection of the rights of the individual

______k. Expedition of business

22. Arrange in order the proper sequence of business carried out during a HOSA meeting. Write a "1" for the first activity, a "2" for the second activity, and so on in the blanks.

______a. Committee reports

______b. New business

______c. Closing ceremony

______d. Opening ceremony

______e. Unfinished business

______f. Reading and approval of minutes of previous meeting

______g. Program

______h. Entertainment and/or recreation

23. List characteristics of a good chairman.

a. ____

b. ____

c. ____

d. ____

e. ____

24. Match proper uses of the gavel to the correct meanings. Write the correct numbers in the blanks. Some answers may be used more than once.

______a. Call the meeting to order

______b. Signal for all members to stand

______c. Signal to be seated

______d. Main motion has been passed or rejected

______e. Meeting is adjourned

______f. Maintain order during meetings

1. Two taps
2. Three taps
3. One tap following the announcement
4. Sharp tap or series of sharp taps
5. One tap

25. Describe the proper way to introduce a motion.

____

____

____

____

____

26. Match the methods of voting to the correct uses. Write the correct numbers in the blanks.

_____a. Used most often on main motions requiring a simple majority vote

_____b. Written ballot

_____c. Needed to verify a 2/3 majority vote or when division of the assembly has been called for

1. Rising vote
2. Secret ballot
3. Voice vote

27. Match parliamentary motions to the correct purposes. Write the correct numbers in the blanks.

_____a. Allows a smaller, select group to study the question and report back to the chapter its findings of a study or the accomplishment of an assigned task

_____b. Stops debate on the motion or motions before the chapter and secures a vote immediately

_____c. Temporarily delays the consideration of an item of business

_____d. Suppresses the question before the assembly without bringing the matter to a vote

_____e. Change the motion or resolution that is being considered to a more satisfactory form

_____f. Allows a chapter to take action which it is prevented from taking because of certain parliamentary rules, a previously adopted chapter program, or the standing rules of the chapter

_____g. Obtains a decision from the chapter to the question on which the president has just rendered a decision

_____h. Calls attention to a violation of the rules or to a mistake in procedure

_____i. Permits the proposer of a motion to remove it from consideration

_____j. Obtain information from the presiding officer concerning some question related to the pending question and proper procedure

1. Lay on the table
2. Previous question
3. Refer to committee
4. Amend
5. Postpone indefinitely
6. Suspend the rules
7. Appeal from the decision of the chair
8. Point of order
9. Parliamentary inquiry
10. Leave to withdraw a motion

_____k. Presents to the chapter the name of a candidate for the office to be filled

_____l. Secures an accurate vote especially when the vote has been taken by voice or by show of hands

_____m. Permits further consideration of a tabled motion

_____n. Permits a member to secure immediate action upon a matter that concerns the right and comfort of the members, another individual, or him- or herself

_____o. Formally closes a chapter meeting

_____p. Permits the chapter to rescind the vote previously taken on a motion and to again consider the items of business

11. Division of the assembly
12. Nomination
13. Adjourn
14. Question of privilege
15. Take from the table
16. Reconsider

28. Complete the following chart on rules that apply to motions used in conducting a meeting.

MOTIONS	MAY INTERRUPT SPEAKER	REQUIRED SECOND	DEBATABLE	VOTE REQUIRED	MOTION THAT MAY APPLY
a. Privileged					
1) To fix time	No	a) ____	Limited	Maj.	Amend, Reconsider
2) To adjourn	No	Yes	No	b) ____	None
3) To take a recess	No	c) ____	Limited	Maj.	Amend
4) Question of privilege	d) ____	No	No	Chmn. rules	All
5) Call for order of day	Yes	No	No	e) ____	None
b. Incidental					
1) Point of order	Yes	f) ____	No or Maj.	Chmn. rules	None
2) Appeal	Yes	Yes	Yes	g) ____	All except amend
3) Suspend rules	No	Yes	No	h) ____	None
4) Withdraw a motion	No	i) ____	No	Maj.	Reconsider
5) Parliamentary inquiry	Yes	j) ____	No or Maj.	Chmn. rules	None
6) Object to consider	Yes	No	No	k) ____	All
7) Call for divisinn of the house	Yes	l) ____	No	Maj.	All
8) Call for division of a question	No	Yes	No	m) ____	All
c. Subsidiary					
1) Lay on table	No	Yes	n) ____	Maj.	None
2) Previous question	No	Yes	No	o) ____	Reconsider
3) Refer to committee	No	p) ____	Yes	Maj.	Amend, Recon., Prev. Ques.
4) Amend	No	Yes	Yes	Maj.	Amend, Recon., Prev. Ques.
5) Postpone indefinitely	No	Yes	Yes	Maj.	Lim. Deb., Prev. Ques., Recon.

MOTIONS	MAY INTERRUPT SPEAKER	REQUIRED SECOND	DEBATABLE	VOTE REQUIRED	MOTION THAT MAY APPLY
d. Main Motions					
1) General main motion	No	Yes	Yes	Maj.	All
2) Specific main motion					
a) To take from table	Yes	Yes	q) ____	Maj.	None
b) To reconsider	Yes	Yes	Yes	Maj.	Lim. Deb., Prev. Ques. Table
c) To adopt a resolution	No	Yes	Yes	Maj.	All
d) To adjourn	No	Yes	Limited	Maj.	Amend, Reconsider
e) To create order of day	No	Yes	Yes	Gen.--Maj. Spec.--2/3	All
f) To amend	No	Yes	Yes	Maj.	Amend, Recon., Prev. Ques., Lim. Deb.

29. State the basic rules that apply to motions used in conducting a meeting.

a. ____________________

b. ____________________

30. Select from the following list steps that make a good meeting. Mark each correct answer with an "X."

_____a. Beginning and ending on time

_____b. Moving along with "snap" to prevent boredom and wasted time

_____c. Letting the good leaders do the talking to avoid wasting time

_____d. Serving snacks while the meeting is in process

_____e. Conducting business according to parliamentary procedure

_____f. Bending the rules of order to avoid boredom

_____g. All members expressing appreciation to guests for their attendance

_____h. Arranging the seating plan so everyone can see the program

_____i. Getting together with officers right before the meeting to plan the sessions

_____j. Advanced planning and practice by the executive committee

_____k. Preparing written and oral committee's, secretary's, and treasurer's reports

_____l. Proceeding according to the order of business

_____m. Giving the guest speaker some indication of the topic desired and length of the speech

_____n. Helping with any clean-up duties

_____o. Having an official greeter to make everyone feel welcome and to prevent interruptions of serious portions of the meeting

_____p. Involving all members in at least one committee

_____q. Encouraging the advisor to join in and vote on issues for more support

_____r. Seating everyone in alphabetical order

_____s. Proceeding with minimum participation by the advisor(s)

31. Recite the National HOSA creed.
32. Use the proper sequence for moving a main motion.
33. Use the proper sequence for moving the previous question.
34. Evaluate a chapter meeting.
35. Evaluate the effectiveness of parliamentary procedure.

(NOTE: If activities 31-35 have not been finished before the test, ask your instructor when they should be completed.)

PARTICIPATION IN STUDENT ORGANIZATIONS
UNIT III

ANSWERS TO TEST

1. a. 3
   b. 6
   c. 2
   d. 7
   e. 4
   f. 9
   g. 8
   h. 1
   i. 5
2. a. Helps develop leadership qualities
   b. Helps individual learn to work with others
   c. Encourages participation in activities other than school courses
   d. Helps student develop interest in community civic affairs
   e. Prepares student to take an active part in professional organizations after career choice is made
   f. Provides opportunity to make new friends
3. a, b, d, f, g, i
4. a, c, d, e, g, i
5. b, d, e, f, h, i, j
6. a. 5
   b. 2
   c. 4
   d. 6
   e. 1
   f. 3

7. a. 2
   b. 3
   c. 1

8. The hands of HOSA mold the health of tomorrow

9. a, c, d

10. Description should include:
    a. Navy blue blazer
    b. White or navy blue pants or skirt
    c. Maroon scarf or tie with white HOSA imprint
    d. Plain, tailored white shirt with winged collar

11. a. White
    b. Maroon
    c. Blue

12. a. 1
    b. 2
    c. 3
    d. 4

13. a. Local chapters
    b. Oklahoma Association of HOSA
    c. National HOSA

14. a. 5
    b. 4
    c. 2
    d. 1
    e. 3
    f. 8
    g. 6
    h. 9
    i. 7
    j. 10

15. Any four of the following:
    - a. Capable officers and leaders
    - b. Responsibility for chapter activities shared by all members
    - c. Challenging program of activities
    - d. Proper recordkeeping
    - e. Well-planned, regularly held chapter meetings
    - f. Support from school officials and community leaders
    - g. Active member participation in chapter activities

16. b, c

17. a. Professional activities
    - b. Civic activities
    - c. Service activities
    - d. Social activities
    - e. Fund-raising activities

18. a. All members of Oklahoma Association of HOSA can participate; all members are provided with leadership training; provides competitive events and leadership-scholarship skills
    - b. National HOSA Convention
    - c. All members of Oklahoma Association of HOSA can participate; leadership training for local chapter officers is provided; elections of secondary and full-time officers are held
    - d. Vocational Leadership Institute (STATE)

19. Description should include:
    - a. State convention in the fall
        - 1) Student Day provides an opportunity for student affiliates to be a part of the OSALPN
        - 2) Several contests are held that day for students
    - b. Student can attend division meetings, be a voting member, and also serve on the executive boards as a director

c. Student affiliate receives the *OSALPN Newsletter* and the national magazine, *Nursing Care,* as a paid member of organization

d. Upon graduation and after state boards are taken, student may pay dues and become a full member

20. a. 6

b. 5

c. 1

d. 4

e. 3

f. 2

g. 13

h. 7

i. 12

j. 16

k. 15

l. 10

m. 11

n. 8

o. 14

p. 9

21. a, b, d, g, h, j, k

22. a. 3

b. 5

c. 7

d. 1

e. 4

f. 2

g. 6

h. 8

23. a. Willingness to work
    b. Self-confidence
    c. Well-developed voice
    d. Neat appearance
    e. Ability to make fair and impartial judgments

24. a. 1
    b. 2
    c. 5
    d. 3
    e. 3
    f. 4

25. Description should include:
    a. Have only one main motion on the floor at a time
    b. Receive recognition by the chair before speaking
    c. Stand and address the chair as "Mr. Chairman" or "Madame Chairman"
    d. Say, "I move . . ."
    e. Word all motions in a positive way so that a "yes" vote means the membership is in favor of the proposed motion

26. a. 3
    b. 2
    c. 1

27. a. 3
    b. 2
    c. 1
    d. 5
    e. 4
    f. 6
    g. 7
    h. 8
    i. 10
    j. 9
    k. 12
    l. 11
    m. 15
    n. 14
    o. 13
    p. 16

28. a. Yes
    b. Majority
    c. Yes
    d. Yes
    e. None
    f. No
    g. Majority
    h. 2/3
    i. No
    j. No
    k. 2/3
    l. No
    m. Majority
    n. No
    o. 2/3
    p. Yes
    q. No

29. a. Motion of higher precedence may be proposed when a motion is pending
    b. Motions are considered and voted upon in reverse order to their proposal

30. a, b, e, g, h, j, k, l, m, n, o, p, s

31. Evaluated to the satisfaction of the instructor

32. Evaluated to the satisfaction of the instructor

33. Evaluated to the satisfaction of the instructor

34. Evaluated to the satisfaction of the instructor

35. Evaluated to the satisfaction of the instructor

COMMUNICATIONS
UNIT IV

UNIT OBJECTIVE

After completion of this unit, the student should be able to use effective communication skills and to develop good rapport with people. This knowledge will be evidenced by completion of assignment sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with communications to the correct definitions.
2. State purposes of communication.
3. List methods of communication.
4. Select from a list factors that improve communication.
5. Match techniques of verbal communication to their descriptions.
6. State rules for effective listening.
7. Match techniques of nonverbal communication to their descriptions.
8. Describe barriers to communication.
9. Describe factors that influence rapport between nurse and other staff.
10. Select from a list factors that promote rapport between patient and nurse.
11. Select from a list basic principles of communication for nurses.
12. Describe considerations taken when communicating with a special needs patient.
13. List important information to consider when explaining a treatment or procedure to a patient.
14. List written resources that provide guideline information for effective patient care.
15. Arrange in order information given to patients about their care.
16. Describe ways to handle awkward situations where communication may be difficult.
17. State rules to follow when communicating by telephone.
18. Select from a list rules to follow when using written communications.

19. Pronounce words distinctly.
20. Analyze voice qualities.
21. Give orders, directions, and instructions.
22. Practice communication skills.
23. Evaluate communication techniques used with patient.

COMMUNICATIONS
UNIT IV

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

A. Provide student with objective sheet.

B. Provide student with information sheet.

C. Make transparency.

D. Discuss information sheet.

E. Provide student with assignment sheets.

F. Discuss assignment sheets.

G. Provide equipment and job sheets from other units to assist students in completing Assignment Sheet #3.

(NOTE: Job sheets other than the ones mentioned may be used.)

H. Provide opportunity for students to do roleplaying using Assignment Sheets #4 and #5.

I. Bring a tape recorder for students to use when analyzing voice qualities.

J. Ask representative from telephone company to speak to students on telephone etiquette.

(NOTE: Many times they will bring equipment for students to practice with.)

K. Provide students with copies of written communication forms used in the facilities where they will be working clinically. This will help students become accustomed to format.

L. Discuss Assignment Sheet #5 in depth before student makes first contact with patient.

(NOTE: The first time the student makes contact with a patient is a stress-filled occasion. If the students can practice their skills and know what to expect they will be more relaxed when contact is made. This assignment sheet could be used many times as the student becomes more confident in communication skills.)

M. Give test.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Transparency master--TM 1--Communicating

D. Assignment sheets

1. Assignment Sheet #1--Pronounce Words Distinctly
2. Assignment Sheet #2--Analyze Voice Qualities
3. Assignment Sheet #3--Give Orders, Directions, and Instructions
4. Assignment Sheet #4--Practice Communication Skills
5. Assignment Sheet #5–Evaluate Communication Techniques Used with Patient

E. Test

F. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study.* Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

B. *Communications.* Anoka: Minnesota Instructional Materials Center, 1978.

IV. Films:

A. *Person to Person: Making Communication Work for You.* Color, 11 min., Sandler Institutional Films, 1972. Available from Sandler Institutional Films, 1001 North Poinsettia Place, Hollywood, California 90046.

(NOTE: This film is available on a free-loan basis only to Oklahoma vocational teachers through the State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order from the address listed above.)

B. *How to Put on a Rumor Clinic.* Available from Anti-Defamation League of B'nai B'rith, 315 Lexington Avenue, New York, New York 10016.

(NOTE: Send for catalog for materials available.)

V. Filmstrips:

A. *Nonverbal Communications in Nursing.* Available from Concept Media, P.O. Box 19542, Irvine, California 92714.

B. *Nurse-Patient Interaction.* Available from Concept Media, P.O. Box 19542, Irvine, California 92714.

COMMUNICATIONS
UNIT IV

INFORMATION SHEET

I. Terms associated with communications

   A. Communication--Exchange of thoughts, feelings, and information by verbal or non-verbal messages

   B. Impression--Effect of external stimuli on the mind

   C. Expression-Look, intonation, or sign that conveys meaning or feeling

   D. Inflection-Change in pitch or loudness of the voice

   E. Rapport--Relationship based on closeness and understanding

   F. Medical record-Patient's chart; the written legal document of the history and progress of a patient

   G. Evaluation-Determination of worth or significance by careful appraisal or study

   H. Assessment--Purposeful gathering and analysis of pertinent information

   I. Identify--Recognize; be aware of

   J. Observation--Noting a fact or occurrence

   K. Perception-Result of an observation; awareness of a symptom

   L. Barrier--Something that hinders or separates

   M. Verbal--Relating to or consisting of spoken words

   N. Nonverbal--Involves using other forms of communication rather than words

   O. Preconception-Opinion formed at an earlier time or from previous experience

   P. Accurate--Free from error

   Q. Legible--Plain; easily read

   R. Stereotype--Something conforming to a fixed or general pattern

   S. Anticipate--To foresee and deal with in advance

   T. Relationship-Association between those who feel comfortable and close together

   U. Trust--To place confidence

INFORMATION SHEET

II. Purposes of communication

  A. Knowledge

  B. Information

  C. Socialization

III. Methods of communication

  A. Verbal

  Examples: Talking, writing

  B. Nonverbal

  Examples: Listening, reading, touching, using body language

IV. Factors that improve communication

  A. Get the listener's attention

  B. Use questions wisely

  (NOTE: Find out what the person already knows and if the person understands what is being said.)

  C. Talk about one subject at a time

  D. Avoid use of technical terms unless you know the listener is familiar with them

  (NOTE: This is especially important in communication from nurse to patient. Use lay terms as much as possible but when necessary to use technical terms, explain their meanings.)

  E. Plan what you are going to say in advance

  F. Encourage the listener to ask questions and participate

  (NOTE: Reassure the patient that no question is too foolish to ask and that you are willing to spend the time answering questions.)

  G. Think before you respond to questions

  (NOTE: Make sure that the information you give is correct and plan how you will give the information.)

  H. Speak distinctly

INFORMATION SHEET

V. Techniques of verbal communication

A. Open-end comments or questions--Bridging or transitional phrases that encourage people to continue speaking

Examples: "And then what did you do?"

"You were saying that. . . ."

B. Reflecting or repeating--Restating part of a person's statement in the form of a question; exploring underlying feelings

Examples:
Patient: I'm so tired.
Nurse: You're tired?
Patient: Yes, I feel so depressed and tired.
Nurse: How are you feeling this morning?
Patient: I AM FINE, JUST FINE!!!

The nurse gets the impression that the patient is either angry or in pain from the facial expression and the tone of voice. The nurse reflects this feeling by saying, "Your voice seems to be telling me that you are not fine this morning."

C. Sharing observations--Nurse comments on patient's behavior

Example: Nurse notices that patient has tears falling down his or her cheeks. Instead of automatically deciding why, the nurse says, "You're crying. Can you tell me why?"

VI. Rules for effective listening

A. Let the speaker finish speaking and do not interrupt

B. Be patient

C. Do not criticize or pre-judge

D. Try to put yourself in the person's place

E. Clarify points or statements that you do not understand

VII. Techniques of nonverbal communication

A. Touching--Transmitting a message through physical contact

(NOTE: Many times a gentle touch to an anxious patient may mean more than any verbal conversation.)

B. Facial expressions--Making opinions or feelings known by certain movements of mouth, eyes, eyebrows, etc.

Example: Grimacing when something repulses you

INFORMATION SHEET

C. Body language--Communicating by body stance or position

Examples: Hands on hips–Authoritarian

Arms folded in front--Not listening, unreachable

VIII. Barriers to communication (Transparency 1)

A. Failure to see patient as an individual--Biased or making value judgments, including stereotyping and preconceptions of people that prevent one from seeing the other person as he or she really is

Examples: "All (Irish, Italian, Jewish, Indian, Catholic) patients behave in certain ways."

"All nurses are needle-happy."

"All male patients are chauvinists."

B. Failure to recognize hidden meanings of communication--Words have different meanings to each individual

Example: Patient: When am I going home?
Nurse: Ask your doctor.

The patient's question may have many different meanings and you must ask questions to determine the real reason for the question

C. Failure to listen--Breakdown in communication because nurse may be too tired or bored, or patient may be too ill or upset to understand what is being said

D. Use of clichés and automatic responses–Statements that are used to avoid interaction between people

Examples: "Don't worry. Everything will be fine."

"It's only minor surgery."

"Mr. Brown had the same condition and he is doing fine."

"Don't worry about a thing."

E. Interrupting before patient has finished--Gives patient the impression that you are in a hurry or that what he or she is saying is not important

F. Failure to clarify comments–Assuming that you know what the patient has said may lead to misunderstandings

INFORMATION SHEET

G. Limited vocabulary--Patient may not understand words that are common to you

(NOTE: Giving an example of what you think the patient has said may clarify the meanings for both of you.)

IX. Factors that influence rapport between nurse and other staff

A. Respect other person

(NOTE: As part of a health team each member plays a significant part in that patient's care. You must have respect for your co-worker's dignity and profession.)

B. Express yourself clearly and distinctly when communicating by telephone, in person, and in writing

(NOTE: Many misunderstandings can occur when you do not communicate clearly. You may know what you mean when you write on the patient's chart or speak to other personnel, but they might not understand.)

C. Discuss information concerning patient's individual needs that would be helpful to co-workers involved in direct care

(NOTE: Report area is a good place to discuss patient's problems, but not in the coffee shop, cafeteria, or downtown in the shopping center. *Do not* discuss *other* staff members in these areas either.)

D. Use the proper chain of communication when dealing with problems

Example: If you are a charge nurse you would be speaking to the head supervisor and if you are a staff nurse you would speak to your charge nurse or team leader

X. Factors that promote rapport between patient and nurse

A. Put yourself in the patient's place

(NOTE: How would you want to be treated? When you communicate with a patient ask yourself how you would feel in his or her place.)

B. Use verbal and nonverbal personal contact

(NOTE: A patient may be too ill or upset to understand the meaning of the words that you are saying, but he or she can still hear the sound of your voice. Do not say anything within the patient's hearing that you would not want her or him to hear. Your touch should be light but firm; never rough.)

C. Show empathy for patient and his or her family

(NOTE: As a nurse you need to consider not only the feelings and needs of the patient, but also the patient's family. Help the patient to cope with his or her feelings and assist the family in understanding the patient's needs.)

INFORMATION SHEET

D. Speak to the patient and family on their level of understanding

(NOTE: Use terms when explaining procedures or conditions that lay persons can understand. Save the medical terminology for discussion with other health professionals. You will have better cooperation from patient and family if they can understand what is happening.)

E. Allow the patient and his or her family to be a part of decisions concerning the patient's care

XI. Basic principles of communication for nurses (Assignment Sheet #5)

A. Listen to the patient completely and concentrate on what he or she is telling you

B. Do not act as if you are in too much of a hurry to listen

(NOTE: Don't stand with one hand on the door and shift your feet back and forth as if you can't wait to leave.)

C. Observe the patient carefully while he or she is talking to you

(NOTE: The patient might say one thing but display actions that tell a different story.)

D. Turn direct questions back to patient for further explanation

Example: "Is there a reason why you ask?"

E. Do not whisper within hearing distance of the patient's room

(NOTE: You may think that the patient is sleeping or unconscious but he or she can hear at least part of your conversation. The patient may think you are talking about him or her when you may be talking about someone else.)

Example: Picture yourself in the hospital undergoing tests and fearful. You hear the nurse outside your door mention to another nurse something about a diagnosis of cancer. Wouldn't you wonder if he or she was talking about you?

F. Do not diagnose

(NOTE: Nurses play a vital function in the diagnosing of diseases and disorders, but that is not their prime role. If your patient complains of abdominal pain, do not automatically make your own diagnosis and treat as such. Gain more information concerning the pain and discuss with physician.)

G. Tell patient the truth when possible

(NOTE: Do not lie to the patient. If necessary, it may be wise to just say nothing, answer by a question, or simply say, "I don't know.")

H. Do not anticipate what the patient is going to say

INFORMATION SHEET

XII. Considerations taken when communicating with a special needs patient

(NOTE: When a patient is unable to communicate or has difficulties for various reasons, several general steps must be taken. If the problem is due to a physical condition, an assessment should be made of the involvement. This information should be shared with all staff members who will be working with this patient. The method of communication agreed upon should be noted in the chart, on the Kardex, and in the care plan.)

A. Hearing

1. Make sure that health care staff knows the consistent method of communicating with this patient
2. Do not startle patient if he or she is asleep or does not see you enter the room
3. Speak directly to the patient so that he or she may read your lips

   (NOTE: Do *not* speak *too* loudly, but do speak distinctly.)
4. Speak distinctly and slowly to patient especially when you are giving instructions or explaining procedures

   (NOTE: Use pictures whenever necessary to help you clarify your explanation.)
5. Make sure a resource person is obtained when patient speaks by sign language or make allowances for trained family members to be there when interpretations are needed

   (NOTE: Patients may be able to read and understand written notes for some communication.)

B. Speech or language

1. Base your method of communicating on the condition of speech problem

   Examples: A total laryngectomy patient who has not yet learned methods for speaking may need a chalkboard or a magic slate for writing notes
2. Be patient with the person who has a speech impediment such as stuttering or lisping

INFORMATION SHEET

3. Obtain an interpreter for patients who speak a foreign language

   (NOTE: If family members cannot be present, contact persons in the community or staff members who speak that language to assist you in explaining procedures and giving instructions. Visuals can be ordered that have general questions asked in different languages that the patient may read. *Tabor's Cyclopedic Medical Dictionary* has common words in five languages.)

C. Sight

1. Patients who have limited vision should have large typewritten materials available

   Example: Diet menus in large type

   (NOTE: The patient with limited vision who must use glasses or a magnifying glass will feel much more secure if he or she can keep equipment close by.)

2. Do not startle the patient by coming hurriedly into the room, jostling the bed, or touching him or her without first speaking

   (NOTE: Knock softly on the door, call the patient by name and give him or her your name. Tell the patient each step in every procedure so that he or she will be prepared.)

3. Obtain materials and equipment that your patient is comfortable in using for communication

   Examples: Tape recorders, Braille books

XIII. Important information to consider when explaining a treatment or procedure to a patient (Assignment Sheet #3)

A. Description of the treatment or procedure

B. Purpose of or desired outcome of the treatment or procedure

C. Patient's part in carrying out the treatment or procedure

D. Indication as to how it will feel

E. Frequency of the treatment

F. Duration of the treatment

Example: "Mr. O'Brian, I am going to be giving you a cleansing enema. This enema is to prepare you for surgery in the morning by emptying your bowel of any waste material. The solution will be put into the colon through your rectal opening and you will need to hold the liquid as long as possible before you expell it. You will feel some pressure as the solution fills the lower colon. This will be the only enema you will receive before surgery. The whole process will take approximately 30 minutes."

INFORMATION SHEET

XIV. Written resources that provide guideline information for effective patient care

A. Kardex

B. Patient's chart

C. Vital signs records

D. Care plan

(NOTE: These are common written resource areas that you can refer to when you need information about a patient's care. There may be other written areas in the facility in which you are employed that you need to become familiar with.)

XV. Information given to patients about their care

A. Your name and title

(NOTE: When entering a patient's room be sure to call him or her by name and identify yourself, especially if this is the first time you have seen this patient.)

Example: "Good morning, Mrs. Thomas. I am Miss Young, student nurse."

B. What you are going to be doing for the patient

Example: "I am going to be assisting you with your bath this morning."

C. Length of time you will be with patient

Example: "I will be your nurse until 2:00 p.m. today."

D. Specific activities or treatment for which the patient is scheduled

Example: "I will prepare your bath right now so that you will be ready to go to X-ray at 10 this morning."

XVI. Ways to handle awkward situations where communication may be difficult (Assignment Sheet #4)

A. When patient asks personal questions

1. Decide what personal questions you can answer

Examples: "What made you decide on nursing as a career?"

"What's your phone number?"

(NOTE: Obviously you could answer the first question without divulging information you don't feel the patient needs, but the second question could be answered quite honestly with, "It is against hospital policy for us to give out our home phone numbers.")

INFORMATION SHEET

2. Remember that the patient usually asks these questions because he or she is interested, lonely, uncomfortable, or bored

   (NOTE: The best solution to the situation is to answer the questions you feel comfortable with and don't let the patient know if you are shocked. Handle yourself with tact and maturity if you feel you should confront the patient with what has been said.)

B. When patient asks questions about other patients

1. Never reveal privileged information

   Example: If another patient has died and your patient asks about the death, you may ethically say that, "Yes, the patient did die" and the time but no other details need to be given

2. Give patient reason for not answering; do not hurt his or her feelings as the patient may be genuinely concerned

C. When patient asks about own condition or diagnosis

1. It is not the role of the nurse to give all diagnostic information to the patient

2. The nurse needs to find out what the patient already knows and make the physician aware that the patient is concerned and is asking questions

D. When patient refuses treatment

1. Ask questions to find out why a patient does not want to participate in his or her treatment

   Example:

   Mrs. Brown: I don't want my pelvic traction on today.

   Nurse: You don't want to have your pelvic traction on today? Can you tell me why?

   Mrs. Brown: It has just rubbed my lower back until it is raw and is terribly uncomfortable.

   Nurse: We can fix that right away, Mrs. Brown. I'll adjust the belt and add a little protective padding so that it won't rub your back.

   Mrs. Brown: Thank you. I've felt better since I've had the traction. I just couldn't stand that rubbing on my back anymore.

INFORMATION SHEET

2. Give extra reassurance to encourage the patient to take part in his or her treatment

Example: Mr. Travis: I just had surgery yesterday. Surely you don't expect me to get up and walk today.

Nurse: Mr. Travis, the reason we want you to get up and walk a few steps is to improve your circulation, help you regain muscle tone, and reduce the chances of your getting upper respiratory infection. We will be giving you something for pain about 30 minutes before we help you up.

Mr. Travis: I guess I can see the need to get up and if I can have something for pain it won't be as difficult.

E. When patient complains about the care he or she is receiving

1. Find out the true reason for the complaint

2. Do not become defensive; allow patient to vent feelings

Examples: Patient: I hate this horrible food here.

(NOTE: This complaint may be due to cultural eating habits or maybe the patient just doesn't like what has been served. The solution may be to get other foods she or he does like from the kitchen or have the family bring food in, if possible.)

Patient: Why doesn't the doctor ever stay long enough for me to ask all my questions? She doesn't even have time for me and I pay good money for her service.

Nurse: Dr. Hansen is extremely busy, but I am sure she could answer your questions. Why don't you write down your questions today and have them ready for her in the morning?

XVII. Rules to follow when communicating by telephone (Assignment Sheets #1 and #2)

A. Identify yourself by giving your name and title

(NOTE: If you are working in a department, clinical area, or nursing home, identify that area.)

Examples: Mrs. West, student nurse, Three West; Mr. East, student nurse, Dietetics

INFORMATION SHEET

B. Speak clearly but not too loudly

(NOTE: You do not have to speak loudly to be effective.)

C. Note caller's name and make sure you have accurate information

(NOTE: Many times when information is asked for and given it is during a critical situation and information must be exact. If you do not understand what has been said or need time to write the information down, ask the caller to repeat what he or she has said.)

D. Answer the telephone promptly and courteously

E. Use a pleasant tone of voice

XVIII. Rules to follow when using written communications

A. Write legibly

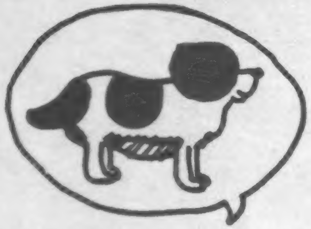
(NOTE: Whether your institution requires that you print or write, everyone must be able to understand what you have written. It may be a life or death matter if something you have written has been misunderstood. It also is wise to remember that you may be called into court to verify your written communication.)

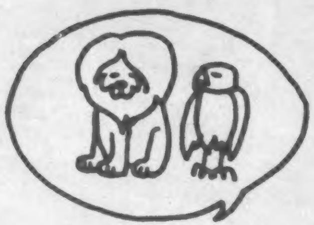
B. Spell correctly

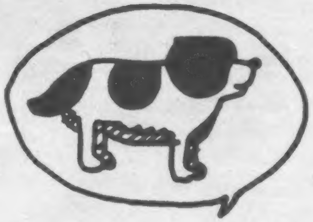
C. Use correct medical terminology

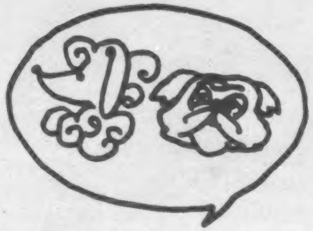
D. Use a method for correcting errors that is accepted by your particular facility

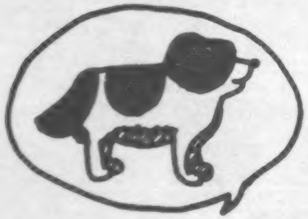
Communicating

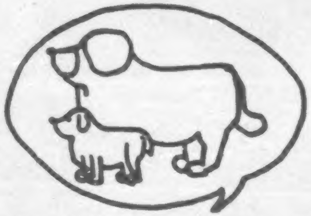

"I HAVE A PET AT HOME"

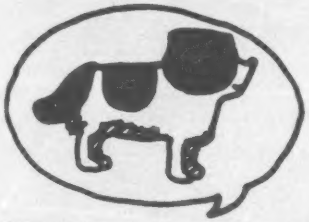

"OH, WHAT KIND OF A PET?"

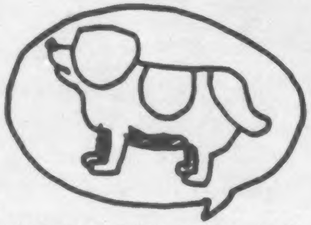

"IT IS A DOG"

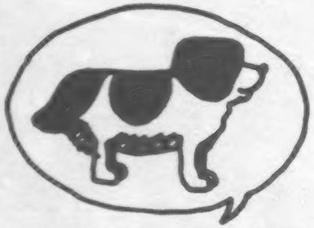

"WHAT KIND OF A DOG?"

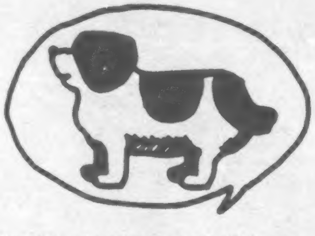

"IT IS A ST. BERNARD"

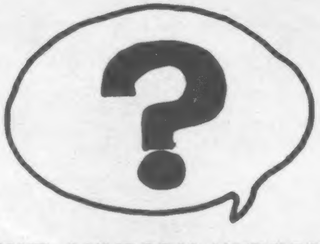

"GROWN UP OR A PUPPY?"


"IT IS FULL-GROWN"


"WHAT COLOR IS IT?"


"IT IS BROWN AND WHITE"


"WHY DIDN'T YOU SAY YOU HAD A FULL-GROWN BROWN AND WHITE ST. BERNARD AS A PET IN THE FIRST PLACE?"


"WHY DOESN'T ANYBODY UNDERSTAND ME ?"

DO NOT ASSUME EVERYONE UNDERSTANDS COMMON WORDS

COMMUNICATIONS
UNIT IV

ASSIGNMENT SHEET #1--PRONOUNCE WORDS DISTINCTLY

NAME ________________________________ SCORE ______________

1. Translate into writing the following words and phrases.
   - a. Wuryagoin? ________________________________
   - b. Whutimizut? ________________________________
   - c. Dya wanna go widdem or widus? ________________________________
   - d. Cher turn tucall, Margrut ________________________________
   - e. Wy dincha stoppim? ________________________________
   - f. Watchagonnado nex Winsdy? ________________________________
   - g. Ohuhdunno-probly jussidat home asuzhel ________________________________
   - h. Wenzee cumin? ________________________________
   - i. Uh tole um uh din wanany ________________________________
   - j. Whidencha gidda ticket forda boxun mach? ________________________________
   - k. Doncha ever unnerstan whucha read? ________________________________
   - l. Uh dunno wy ya din gimme some ________________________________
2. Read the following tongue twisters aloud. Be careful not to omit any necessary vowel or consonant sounds.

   (NOTE: You may want to record parts of this assignment sheet.)

   - a. Strict strong Stephen Stringer snared slickly six silly snakes.
   - b. Strange strategic statistics.
   - c. Shy Sarah saw Swiss wristwatches.
   - d. The sixth sheik's sixth sheep's dead.
   - e. Tie the twine to three tree twigs.
   - f. With which winsome witch were you whispering?
   - g. Well, when Will whiffed the wild wintry wind, he whisked out his wicked whiskey.

ASSIGNMENT SHEET #1

h. At her willful whim, the whip whizzed over the wheelbarrow where Willy was whimpering.

i. Six long slim slick slender slacks slid silently to the floor.

j. Furthermore, Francis Farkwark fried fifteen fish for Francis Fambush's father.

k. She stood on the balcony, mimicking him hiccupping and welcoming him inside.

l. A snifter of snuff is not enough snuff for the snuff sniffer to sniff.

m. Slippery sleds slide swiftly down slick streets.

n. Thomas Tattertoot took tough twine to tie ten twigs to two tall tree trunks.

o. What whim led Whitney White to whittle, whisper, and whimper near the wharf where a whale might wheel and whirl?

p. I never felt felt feel like that fine felt felt.

3. Translate into writing the following words.

a. Dese ____________________

b. Dose ____________________

c. Wen ____________________

d. Budder ____________________

e. Thoid ____________________

f. Ti-ip ____________________

g. Warsh ____________________

h. Caounty ____________________

i. Git ____________________

4. Read the following words aloud. Be careful not to omit any necessary vowel or consonant sounds.

a. Bringing

b. Picture

c. Candidate

ASSIGNMENT SHEET #1

d. Laboratory

e. Midst

f. Fifths

g. Width

h. Pitcher

i. Prairie

j. Route

k. Window

l. Creek

5. Rewrite the following sentences using correct English.

a. Bill said, "I wanna work the afternoon shift today."

____

b. John said, "We'll hafta check to see if we have that brand or not."

____

c. The employee said, "I'm gonna check to see if we can have that delivered or not."

____

____

d. "She coulda done that yesterday."

____

e. "Commere. I need your help," said the supervisor.

____

f. "Will you gimme a hand?"

____

g. "Doncha want dessert?" asked the waitress.

____

ASSIGNMENT SHEET #1

h. "I dunno if we have any."

____

i. "Hooja say you want to see?"

____

j. "Woncha come back again?"

____

COMMUNICATIONS
UNIT IV

ASSIGNMENT SHEET #2–ANALYZE VOICE QUALITIES

NAME ________________________ SCORE ____________

Make a tape recording of your voice. Then, listen to the tape and complete the rating below. Using the rating of your voice on tape, prepare a list of ways in which you can improve it. Complete the list on a separate piece of paper.

Have your classmates rate your voice, too. Check back periodically to see if there has been any noticeable progress.

VOICE RATING	Yes	Maybe/Sometimes	No
1. Do you speak too loudly or in a noisy manner?			
2. Do people frequently ask you to repeat a statement you have made?			
3. Do you speak in the same tone continually?			
4. Do you speak with the same volume continually?			
5. Do you speak in an artificial, unnatural, and affected voice?			
6. Is your voice high-pitched and shrill?			
7. Do you frequently speak with lungs almost empty?			
8. Do you speak in long sentences which frequently lose their meaning?			
9. Do you hiss when using certain letters, such as P, B, T, C, and S?			
10. Do you speak in mush tones as though you had something in your mouth?			
11. Do you use "uh" and "er-uh" and "you know" frequently?			

ASSIGNMENT SHEET #2

VOICE RATING	Yes	Maybe/Sometimes	No
12. Is your voice clouded and husky?			
13. Do you talk "through your nose"?			
14. Do you talk in a jerky manner?			
15. Do you talk in a whining and apologetic manner?			
16. Do you talk in a dominating, dictatorial tone?			
17. Do you stammer and stutter?			
18. Do you often speak too fast or in a slow drawl?			
19. Do you mispronounce words frequently?			
20. Does your voice lose its force and expression at the end of sentences?			
21. Do you speak in a flat, dull, and colorless tone?			
22. Do you jumble up consonants which makes your speech hard to understand?			
23. Do you use a "gushy" or "gooey" voice when talking to friends?			
24. Do you choke off sounds?			
25. Is your voice unpleasant when you laugh?			
26. Do you put the "d," "t," and "ing" on the end of words?			
27. Do you run words together?			
28. Do you use slang or speak with an accent?			
29. Do you have an adequate vocabulary?			
30. Do your words flow out evenly and clearly?			
31. Is your voice friendly and cordial?			
32. Can you be heard clearly in the back of the room when speaking?			
33. Do you emphasize your main thought?			

COMMUNICATIONS
UNIT IV

ASSIGNMENT SHEET #3--GIVE ORDERS, DIRECTIONS, AND INSTRUCTIONS

NAME____ SCORE________________

Every day as a nurse you will also act as a teacher. You will be giving instructions and directions to your patients and will be directing orders to other health staff members. These instructions must be clear and understandable because of the importance of accuracy when dealing with human lives. Sometimes it is difficult to explain instructions to someone who has never performed a procedure or who has no medical background. It will be up to you to simplify your instructions so that it will be clear what you are wanting from the participant.

Below are two groups of instructions and directions for you to practice. Select a classmate to work with you and help evaluate your performance. Obtain equipment and job sheets from instructor. Choose one set of instructions from each area and give the directions to your classmate. After completing the procedure allow the classmate to evaluate your instructions by answering the questions given after each set.

EXPLANATIONS TO PATIENTS

1. Explain to the patient that you are going to give him or her a cleansing enema. Follow through all the steps using the job sheet on enemas provided by your instructor.
2. Explain to the patient that you want him or her to give you a midstream urine specimen. Follow through all the steps using the job sheet on collecting a urine specimen provided by your instructor. You do not have to collect the specimen, just give your patient instructions on how to obtain one.
3. Explain to your patient that you are going to assist him or her in sitting on the side of the bed, moving to a wheel chair and back again. Use the job sheet on moving patients.

PATIENT----

a. Were the directions or instructions clear? Why or why not?

____

____

____

____

ASSIGNMENT SHEET #3

b. Were they in an order that could be followed easily if you knew nothing about the procedure beforehand? If not, how could the order have been improved?

____

____

____

____

c. Were there any words used that you do not think a patient would have understood? What were they and what might the instructor (nurse) have said?

____

____

____

____

d. Did the person giving the instructions sound confident or uncertain? Why?

____

____

____

____

e. Do you feel that a patient would understand completely what the instructions meant? Why or why not?

____

____

____

____

GIVING DIRECTIONS

1. Use the job sheet for unwrapping a sterile pack. Give your classmate step by step instructions for unwrapping while he or she performs the procedure.
2. Use the job sheet for making beds. Instruct your classmate on how to miter the corner of the sheet while he or she performs the skill.
3. Use the job sheet for putting on and removing a surgical mask. Give the mask to your classmate and instruct him or her on the procedure as he or she performs the skill.

ASSIGNMENT SHEET #3

SKILL PERFORMER--

a. Were the directions or instructions clear? Why or why not?

____

____

____

____

b. Were they in an order that could be followed easily if you knew nothing about the procedure beforehand? If not, how could the order have been improved?

____

____

____

____

c. Were there any unnecessary points made? If so, how could they be eliminated?

____

____

____

____

d. What instructions or directions would have made the procedure clearer for you?

____

____

____

____

e. Did you feel like you mastered the skill? Why or why not?

____

____

____

____

COMMUNICATIONS
UNIT IV

ASSIGNMENT SHEET #4--PRACTICE COMMUNICATION SKILLS

NAME______________________________ SCORE__________

Effective communication between people is the key that opens the door to meaningful relationships. As a nurse you must develop communication techniques to use with patients and other staff members. There are two parts to this assignment sheet. In Part I respond in writing how you would communicate in the situations depicted and explain why you chose that response. Share your answers with the class. In Part II-1 read the script provided and evaluate the responses. Discuss in class. In Part II-2 choose one of the given situations and ask a classmate to roleplay a conversation to be evaluated by the class. Remember all the communication techniques you have learned.

PART I

1. Patient: Nurse, did my test show that I have cancer?

   Nurse response:______________________________

   Reason for response:______________________________

   ____

2. Patient: My leg hurts so bad I'll never be able to go down to physical therapy and walk today.

   Nurse response:______________________________

   Reason for response:______________________________

   ____

3. Patient: That nurse that was just in here had been crying. Is there something wrong? Did I do something wrong?

   Nurse response:______________________________

   Reason for response:______________________________

   ____

4. Patient: I just saw Dr. Rich pull up in a new Mercedes. He sure has a lot of money, doesn't he? I hear he married well. Is that true?

   Nurse response:______________________________

   ____

   Reason for response:______________________________

   ____

ASSIGNMENT SHEET #4

5. Patient: I've got to go home tomorrow. I just have to be there by 10:00.

Nurse response: ____

____

Reason for response: ____

____

6. Patient: I hate it here in this hospital and I'm not staying.

Nurse response: ____

____

Reason for response: ____

____

7. Patient: My wife is having an affair; I know she is. What am I going to do?

Nurse response: ____

____

Reason for response: ____

____

PART II

1. This is a script for you to read and evaluate. After you read the script several times answer the questions on the next page. Discuss your responses in class.

Nurse Dogood: Good morning, Mrs. Fearful. I'm Nurse Dogood and I'm going to get you ready to go to surgery this morning.

Mrs. Fearful: I'm so frightened, Nurse. I didn't sleep all night. I kept thinking about my children at home.

Nurse Dogood: Now, now, I'm sure your children are just fine. Don't worry about sleep. You'll get plenty of sleep down in surgery.

Mrs. Fearful: Will I be asleep before I go to surgery? I want to see my husband before I go. I need to tell him something.

Nurse Dogood: We've got to hurry up and get you all bathed and ready to go. Do you want to take a shower or a tub bath?

Mrs. Fearful: Well, I guess I'll take a shower. Has my doctor come in yet? He said he would check on me before I go down to surgery.

Nurse Dogood: Oh yes, I saw him come in the back door. He's probably already down in the doctor's lounge getting scrubbed up.

Mrs. Fearful: OH, NO! I must talk to him before I have my surgery.

Nurse Dogood: Now don't you worry about anything. I'm sure things will go alright since he's such a fine surgeon.

ASSIGNMENT SHEET #4

Evaluate the conversation.

a. How do you think the patient felt?____________________

b. What mistakes did Nurse Dogood make?____________________

c. How would you have responded to Mrs. Fearful in each case?____________________

ASSIGNMENT SHEET #4

2. Choose a classmate to roleplay *one* of the following situations with you. Read the case study and make up your own script. Act out your script for the class. This time use better techniques than Nurse Dogood. Ask the class to evaluate your responses.

   a. Mr. Spock is to have surgery in the morning. The physician has ordered enemas until clear on your shift. Mr. Spock is 75 years young and has hearing problems but seems very cooperative until you mention enemas. In fact, when you mentioned enemas he rolled over in bed facing the wall and hasn't talked to you since. How do you handle this situation?

   b. The physician has just told you in confidence that the young man in 423 will need to have his leg amputated. When you enter 423 the young man is tearful and quite angry. His question for you is, "Will I have to have my leg amputated?" You are not sure the physician has talked to the young man or if he has just guessed this surgery will need to be done. How will you handle this situation?

   c. Mrs. Pierce looks quite dejected this morning. She is sitting with her head lowered and her hands in her lap twisting a tissue. As you enter the room she looks up at you and says, "What do you want?" It seems that her family has decided that she is not capable of caring for herself and wants to place her in a nursing home. She tells you that she will not go, no matter what she has to do to keep from it. She makes the statement, "No one cares about me. I would rather be dead than in a home for old people." How would you handle this situation?

   d. As you come on duty you find that you have been assigned another floor to work. You don't mind floating occasionally but this is five times in a row that you have been pulled to a different floor. You decide that it is time to talk to your supervisor about the way you feel. Your justification for not wanting to be pulled is that you are working with new patients each time and are not familiar with their care and feel you can't do your best. What would you say to your supervisor?

   e. Mrs. Webb is a young woman who has just gone through a radical mastectomy. Her right breast, lymph nodes, and some muscle tissue were removed three days ago. It is now time for the dressings to be changed. When you bring your equipment to the bedside to change the dressing she states, "I don't want the bandage off. It hurts too bad and I don't want to see it." How do you handle the situation?

COMMUNICATIONS
UNIT IV

ASSIGNMENT SHEET #5--EVALUATE COMMUNICATION TECHNIQUES USED WITH PATIENT

NAME________________________________ SCORE______________

Now that you have had some experience roleplaying with your classmates on effective communication, you are ready for the real thing. Your practiced techniques will be put to use with a patient of your own. When you are assigned to a patient the first thing you need to do is to find out some background information about him or her. This information can be taken from the resource areas mentioned in this unit or from your instructor. Look over this form and know what will be expected of you as you communicate with your patient. Fill out the form after your first contact is made. Discuss with your instructor and/or class how you accomplished your task or how you feel it could have been improved.

1. Patient's initials:______________________________
2. Patient's age:______________________________
3. Diagnosis:______________________________
4. Sex:______________________________
5. Your specific assignment: (Morning care, pre-op care, etc.)

   ____

   ____

   ____

6. How did you attempt to establish a trust relationship?

   ____

   ____

   ____

7. What opportunities did you have to communicate by touch? Did you feel comfortable communicating in this way?

   ____

   ____

   ____

ASSIGNMENT SHEET #5

8. Briefly describe the conversation:

You said: ____________________

____

____

Patient said: ____________________

____

____

You said: ____________________

____

____

Patient said: ____________________

____

____

You said: ____________________

____

____

Patient said: ____________________

____

____

You said: ____________________

____

____

9. What techniques or methods of communication did you use (reflection, open-ended questions, etc.)?

____

____

____

____

ASSIGNMENT SHEET #5

10. How do you feel about the responses you gave?

11. Were you able to help the patient identify any of his or her needs? How?

12. Did you encourage conversation? How?

13. Who did most of the talking? How do you feel about that?

14. What nonverbal behavior did you observe?

15. What nonverbal behavior did you display as far as you know?

ASSIGNMENT SHEET #5

16. In what areas of communication do you feel you need more practice?

____

____

____

17. Which techniques have you found to be the most beneficial?

____

____

____

18. Which ones are the easiest for you to use?

____

____

____

____

COMMUNICATIONS
UNIT IV

TEST

NAME______________________________ SCORE______________

1. Match terms associated with communications to the definitions. Write the correct numbers in the blanks.

______a. Exchange of thoughts, feelings, and information by verbal or nonverbal messages

______b. Effect of external stimuli on the mind

______c. Look, intonation, or sign that conveys meaning or feeling

______d. Change in pitch or loudness of the voice

______e. Relationship based on closeness and understanding

______f. Patient's chart; the written legal document of the history and progress of a patient

______g. Determination of worth or significance by careful appraisal or study

______h. Purposeful gathering and analysis of pertinent information

______i. Recognize; be aware of

______j. Noting a fact or occurrence

______k. Something conforming to a fixed or general pattern

______l. Something that hinders or separates

______m. Relating to or consisting of spoken words

______n. Opinion formed at an earlier time or from previous experience

______o. Free from error

______p. Plain; easily read

1. Stereotype
2. Communication
3. Accurate
4. Observation
5. Evaluation
6. Inflection
7. Expression
8. Legible
9. Preconception
10. Barrier
11. Verbal
12. Identify
13. Impression
14. Medical record
15. Rapport
16. Assessment

______q. Result of an observation; awareness of a symptom

______r. Involves using other forms of communication rather than words

______s. To place confidence

______t. To foresee and deal with in advance

______u. Association between those who feel comfortable and close together

17. Perception
18. Trust
19. Anticipate
20. Nonverbal
21. Relationship

2. State purposes of communication.

a. ____

b. ____

c. ____

3. List methods of communication.

a. ____

b. ____

4. Select from the following list factors that improve communication. Write an "X" in the correct blanks.

______a. Use questions wisely

______b. Use pet names

______c. Plan what you are going to say in advance

______d. Avoid use of technical terms unless you know the listener is familiar with them

______e. Give personal information as examples

______f. Think before you respond to questions

______g. Reassure patient that although this is the first time you have done this procedure, you are well-skilled

______h. Get the listener's attention

______i. Speak distinctly

______j. Avoid eye contact

______k. Encourage the listener to ask questions and participate

______l. Talk about one subject at a time

5. Match techniques of verbal communication to their descriptions. Write the correct numbers in the blanks.

_____ a. Bridging or transitional phrases that encourage people to continue speaking

_____ b. Restating part of a person's statement in the form of a question; exploring underlying feelings

_____ c. Nurse comments on patient's behavior

1. Sharing observations
2. Open-end comments or questions
3. Reflecting or repeating

6. State rules for effective listening.

a. ____________________

b. ____________________

c. ____________________

d. ____________________

e. ____________________

7. Match techniques of nonverbal communication to their descriptions. Write the correct numbers in the blanks.

_____ a. Transmitting a message through physical contact

_____ b. Making opinions or feelings known by certain movements of mouth, eyes, eyebrows, etc.

_____ c. Communicating by body stance or position

1. Body language
2. Facial expressions
3. Touching

8. Describe barriers to communication.

a. Failure to see patient as an individual--____________________

____

____

b. Failure to recognize hidden meanings of communication--____________________

____

____

c. Failure to listen--____________________

____

____

d. Use of clichés and automatic responses--______________________________

____

____

e. Interrupting before patient has finished--______________________________

____

____

f. Failure to clarify comments--______________________________________

____

____

g. Limited vocabulary--____

____

____

9. Describe factors that influence rapport between nurse and other staff.

____

____

____

____

10. Select from the following list factors that promote rapport between patient and nurse. Write an "X" in the correct blanks.

_____a. Use verbal and nonverbal personal contact

_____b. Put yourself in the patient's place

_____c. Show empathy for patient and his or her family

_____d. Allow the patient and his or her family to be a part of decisions concerning the patient's care

_____e. Talk about your physician

_____f. Speak to the patient and family on their level of understanding

_____g. Share your personal problems

11. Select from the following list basic principles of communication for nurses. Write an "X" in the correct blanks.

    ______a. Do not act as if you are in too much of a hurry to listen

    ______b. Do not diagnose

    ______c. Turn direct questions back to patient for further explanation

    ______d. Tell patient the truth when possible

    ______e. Do not whisper within hearing distance of the patient's room

    ______f. Listen to the patient completely and concentrate on what he or she is telling you

    ______g. Give advice when asked

    ______h. Observe the patient carefully while he or she is talking to you

    ______i. Change the subject if topic upsets you

    ______j. Do not anticipate what the patient is going to say

    ______k. Discuss staff problems

12. Describe considerations taken when communicating with a special needs patient.

    a. Hearing-- ____

    ____

    ____

    ____

    ____

    ____

    ____

    ____

    ____

    ____

    b. Speech or language-- ____

    ____

    ____

    ____

c. Sight--____

____

____

____

____

____

____

____

13. List important information to consider when explaining a treatment or procedure to a patient.

a. ____

b. ____

c. ____

d. ____

e. ____

f. ____

14. List written resources that provide guideline information for effective patient care.

a. ____

b. ____

c. ____

d. ____

15. Arrange in order information given to patients about their care. Write a "1" in front of the first step, a "2" in front of the second, and so on.

______a. What you are going to be doing for the patient

______b. Your name and title

______c. Specific activities or treatment for which the patient is scheduled

______d. Length of time you will be with patient

16. Describe ways to handle awkward situations where communication may be difficult.

a. When patient asks personal questions--

b. When patient asks questions about other patients--

c. When patient asks about own condition or diagnosis--

d. When patient refuses treatment--

e. When patient complains about the care he or she is receiving--

17. State rules to follow when communicating by telephone.

a. ____________________

b. ____________________

c. ____________________

d. ____________________

e. ____________________

18. Select from the following list rules to follow when using written communications. Write an "X" in the correct blanks.

_____a. Spell correctly

_____b. Use correcting liquid if available

_____c. Use a method for correcting errors that is accepted by your particular facility

_____d. Write legibly

_____e. Use all abbreviations

_____f. Use correct medical terminology

_____g. Use pencil for ease in correcting

19. Pronounce words distinctly.

20. Analyze voice qualities.

21. Give orders, directions, and instructions.

22. Practice communication skills.

23. Evaluate communication techniques used with patient.

(NOTE: If activities 19-23 have not been finished before the test, ask your instructor when they should be completed.)

COMMUNICATIONS
UNIT IV

ANSWERS TO TEST

1. a. 2
   b. 13
   c. 7
   d. 6
   e. 15
   f. 14
   g. 5
   h. 16
   i. 12
   j. 4
   k. 1
   l. 10
   m. 11
   n. 9
   o. 3
   p. 8
   q. 17
   r. 20
   s. 18
   t. 19
   u. 21

2. a. Knowledge
   b. Information
   c. Socialization

3. a. Verbal
   b. Nonverbal

4. a, c, d, f, h, i, k, l

5. a. 2
   b. 3
   c. 1

6. a. Let the speaker finish speaking and do not interrupt
   b. Be patient
   c. Do not criticize or pre-judge
   d. Try to put yourself in the person's place
   e. Clarify points or statements that you do not understand

7. a. 3
   b. 2
   c. 1

8. Descriptions should include:
    - a. Biased or making value judgements, including stereotyping and preconceptions of people that prevent one from seeing the other person as he or she really is
    - b. Words have different meanings to each individual
    - c. Breakdown in communication because nurse may be too tired or bored, or patient may be too ill or upset to understand what is being said
    - d. Statements that are used to avoid interaction between people
    - e. Gives patient the impression that you are in a hurry or what he or she is saying is not important
    - f. Assuming that you know what the patient has said may lead to misunderstandings
    - g. Patient may not understand words that are common to you
9. Description should include:
    - a. Respect other person
    - b. Express yourself clearly and distinctly when communicating by telephone, in person, and in writing
    - c. Discuss information concerning patient's individual needs that would be helpful to co-workers involved in direct care
    - d. Use proper chain of communication when dealing with problems
10. a, b, c, d, f
11. a, b, c, d, e, f, h, j
12. Descriptions should include:
    - a. Hearing
        - 1) Make sure that health care staff knows the consistent method of communicating with this patient
        - 2) Do not startle patient if he or she is asleep or does not see you enter the room
        - 3) Speak directly to the patient so that he or she may read your lips
        - 4) Speak distinctly and slowly to patient especially when you are giving instructions or explaining procedures
        - 5) Make sure a resource person is obtained when patient speaks by sign language or make allowances for trained family members to be there when interpretations are needed

b. Speech or language

1) Base your method of communicating on the condition of speech problem

2) Be patient with the person who has a speech impediment such as stuttering or lisping

3) Obtain an interpreter for patients who speak a foreign language

c. Sight

1) Patients who have limited vision should have large typewritten materials available

2) Do not startle the patient by coming hurriedly into the room, jostling the bed, or touching him or her without first speaking

3) Obtain materials and equipment that your patient is comfortable in using for communication

13. a. Description of the treatment or procedure

b. Purpose of or desired outcome of the treatment or procedure

c. Patient's part in carrying out the treatment or procedure

d. Indication as to how it will feel

e. Frequency of the treatment

f. Duration of the treatment

14. a. Kardex

b. Patient's chart

c. Vital signs records

d. Care plan

15. a. 2

b. 1

c. 4

d. 3

16. Descriptions should include:

a. When patient asks personal questions

1) Decide what personal questions you can answer

2) Remember that the patient usually asks these questions because he or she is interested, lonely, uncomfortable, or bored

b. When patient asks questions about other patients

1) Never reveal privileged information

2) Give patient reason for not answering; do not hurt his or her feelings as the patient may be genuinely concerned

c. When patient asks about own condition or diagnosis

1) It is not the role of the nurse to give all diagnostic information to the patient

2) The nurse needs to find out what the patient already knows and make the physician aware that the patient is concerned and is asking questions

d. When patient refuses treatment

1) Ask questions to find out why a patient does not want to participate in his or her treatment

2) Give extra reassurance to encourage the patient to take part in his or her treatment

e. When patient complains about the care he or she is receiving

1) Find out the true reason for complaint

2) Do not become defensive; allow patient to vent feelings

17. a. Identify yourself by giving your name and title

b. Speak clearly but not too loudly

c. Note caller's name and make sure you have accurate information

d. Answer the telephone promptly and courteously

e. Use a pleasant tone of voice

18. a, c, d, f

19. Evaluated to the satisfaction of the instructor

20. Evaluated to the satisfaction of the instructor

21. Evaluated to the satisfaction of the instructor

22. Evaluated to the satisfaction of the instructor

23. Evaluated to the satisfaction of the instructor

LEGAL AND ETHICAL RESPONSIBILITIES
UNIT V

UNIT OBJECTIVE

After completion of this unit, the student should be able to function as a health professional within legal and ethical guidelines outlined by the governing agencies. This knowledge will be evidenced by completion of assignment sheet and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with legal and ethical responsibilities to the correct definitions.
2. Distinguish between the terms *legal* and *ethical*.
3. Select from a list legal responsibilities of the student nurse.
4. Describe the Oklahoma Board of Nurse Registration and Nursing Education.
5. Select from a list legal functions of state boards of nursing.
6. Discuss legal responsibilities of the licensed practical nurse.
7. Describe qualifications of the licensed practical nurse as stated in the Oklahoma Nursing Practice Act.
8. Select from a list legal implications concerning licensure of nurses.
9. Match legal responsibilities in specific situations to their correct definitions.
10. Select from a list causes for revoking a license as stated in the Oklahoma Nursing Practice Act.
11. Develop examples of the functions of the licensed practical nurse.

LEGAL AND ETHICAL RESPONSIBILITIES
UNIT V

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Obtain current copy of the *Rules and Regulations Relating to Nursing Education, Licensure and Practice in the State of Oklahoma* from the Oklahoma Board of Nurse Registration and Nursing Education, Suite 400, 4001 North Lincoln Boulevard, Oklahoma City, Oklahoma 73105.

   (NOTE: The booklet serves as a guideline for program standards, rules, and regulations for the Licensed Practical Nurse concerning employment and licensure. Because changes and issues occur frequently, a current copy should be obtained.)

   B. Write to the National Federation of Licensed Practical Nurses, 888 Seventh Avenue, New York, New York 10019 for copies of the "Code of Ethics for Licensed Practical Nurse" and the "Code for the Organization for LPNs."

   C. Provide students with objective sheet.

   D. Provide students with information sheet.

   E. Discuss unit and specific objectives.

   F. Discuss information sheet.

   G. Discuss in class the meanings of the codes obtained from the NFLPN.

   H. Invite a local attorney to speak to class about legal aspects of nursing and the medical profession.

   I. Attend an open hearing concerning a lawsuit that deals with the medical profession.

   J. Obtain legal permits from clinical facilities and discuss the importance of proper use.

   K. Roleplay actions that might constitute various situations that would be considered unethical and/or illegal. Discuss why these actions are wrong or how they should have been handled.

   Examples: Patients being held against their will, treatments being given without consent, defamation of character both written and verbal

   L. Provide students with assignment sheets.

M. Discuss examples on assignment sheets in depth.

(NOTE: Student nurses need to have a clear understanding of what their role will be as a practical nurse. By citing and comparing examples with other students, the functions will become clearer.)

N. Give test.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Assignment Sheet #1--Develop Examples of the Functions of the Licensed Practical Nurse

D. Test

E. Answers to test

III. Unit references:

A. *Rules and Regulations Relating to Nursing Education, Licensure and Practice in the State of Oklahoma.* Oklahoma City: Oklahoma Board of Nurse Registration and Nursing Education, 1979.

B. Rogers, Helen. *Nursing I: A Course of Study.* Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

C. Bernzweig, Eli P., and Willig, Sidney H. *The Nurse's Guide to the Law.* New York: McGraw-Hill Book Company, 1971.

D. Ross, Carmen F. *Personal and Vocational Relationships in Practical Nursing.* Philadelphia: J. B. Lippincott Company, 1975.

IV. Additional resources:

A. Fenner, Kathleen M. *Ethics and Law in Nursing.* New York: Van Nostrand Reinhold Company, 1980.

B. Creighton, Helen. *Laws Every Nurse Should Know.* Philadelphia: W. B. Saunders, 1975.

C. *Nurses' Liability for Malpractice.* New York: McGraw-Hill Book Company, 1975.

D. *Regan Report on Nursing Law.* Media Press, 1231 Industrial Bank Building, Providence, Rhode Island 02903.

V. Films:

A. *Malpractice.* Color, 30 min., American Journal of Nursing Company. Available from American Journal of Nursing Company, Educational Services Division, 555 West 57th Street, New York, New York 10019.

B. *Nursing Torts.* Color, 30 min., American Journal of Nursing Company. Available from American Journal of Nursing Company, Educational Services Division, 555 West 57th Street, New York, New York 10019.

C. *But Doctor, You Said . . .* Metropolitan Life Insurance Company. Available from Metropolitan Life Insurance Company, Health & Safety Education Division, One Madison Avenue, New York, New York 10010.

D. *Best of Care.* Available from Merril Film Lab, 1269 Gest Street, Cincinnatti, Ohio 45203.

(NOTE: This film is available at no cost.)

E. *Introduction to Legal Aspects of Hospital Work.* Available from Multi Media, 340 Jones Street, San Francisco, California 94102.

VI. Filmstrip--*Legal Implications in Nursing.* Color. Available from Trainex Corporation, Box 116, Garden Grove, California 92642.

LEGAL AND ETHICAL RESPONSIBILITIES
UNIT V

INFORMATION SHEET

I. Terms associated with legal and ethical responsibilities

   A. Function--Action for which a person or thing is specially fitted or used

   B. License--Legal document granted by a designated authority to permit a person to practice an occupation

      (NOTE: Having a license has become mandatory in many states.)

   C. Responsibility--State of being held accountable for something

   D. Implementation--Act of carrying out

   E. Qualification--Requirement; a condition that must be complied with

   F. Moral--Of or relating to the principles of right and wrong in behavior

   G. Revoke--To annul or call back

   H. Intemperate--Given to excessive indulgence of appetite or desire

   I. Fraud--Deceit or trickery

   J. Felony--Serious crime punishable by law with penalties ranging from imprisonment for more than one year to death

      (NOTE: A misdemeanor is a crime less serious than a felony.)

   K. Incompetent--Inadequate or unqualified

   L. Disreputable--Of poor character; not decent

   M. Board of nursing--Government agency that grants nursing licenses and administers nursing practice acts

   N. Code of ethics--Rules of good conduct drawn up by an individual group; reflects the highest ideals of the group

   O. Good Samaritan Statutes--Laws of a state which exempt from liability for damages persons who in good faith give emergency care to an injured person at the scene of an accident or other casualty

      (NOTE: The laws vary from state to state. Some cover only physicians but others do include nurses and other persons.)

   P. Assault--Threat or an attempt to contact the body of another person without actually doing so and without consent; threat to use force

INFORMATION SHEET

Q. Battery--Actual use of force or merely touching someone against the will of that person

R. Impunity--Exemption or freedom from punishment

S. Defamation--To harm the reputation of someone or something by libel or slander

(NOTE: *Libel* refers to any written defamation, whereas *slander* refers to oral statements.)

T. Negligence--Failure to do what a person of ordinary judgement or prudence would do or doing what a reasonable person would not do

U. Malpractice--Negligent acts of persons who have had specialized professional education and training

V. Confidential--Private or secret

W. Tort--Civil wrong arising from a person's failure to use care in contact with other persons, or failure to refrain from injuring the person or property of another

Examples: Intentional tort--invasion of privacy, unintentional tort--malpractice

X. Interstate endorsement--Formal recognition of nursing qualifications from state to state

II. Legal and ethical

A. Legal--Pertains to rules or the law; one who does not conform may be held accountable for actions and formally punished

B. Ethical--Accepted professional standards of conduct; may not necessarily be considered illegal

(NOTE: Many actions may be unethical but not actually illegal, whereas if one commits an illegal action, it will probably be unethical also.)

III. Legal responsibilities of the student nurse

A. Responsibility is assumed by the student, the nursing supervisor, and the nursing instructor

B. Responsibility for action is assumed in some instances by the employing institution and/or the patient's doctor

(NOTE: All health professionals should carry a type of liability insurance to cover them against damages if they are ever named in a lawsuit. As a student there are types of policies that can be purchased to cover the student until he or she is licensed. At this time a different policy is needed. In many cases, schools or hospitals carry liability insurance to cover students.)

INFORMATION SHEET

C. Student nurses may in emergency situations give first aid and be covered by the Good Samaritan Law

D. A student nurse should be familiar with the rules and regulations of the institutions in which she or he is a student and should follow them exactly

(NOTE: Be sure to read the policy handbook that outlines the rules and regulations for both your school and the institutions where you will be doing your clinical work.)

IV. Oklahoma Board of Nurse Registration and Nursing Education

A. Members of the board consist of five registered nurses who serve for five years and who make and adopt all rules and regulations concerning nursing practice and education

B. Three licensed practical nurses function with the board to act on matters pertaining to the licensing and education of practical nurses

C. Each year the governor appoints one registered nurse from a list of five or more with at least five years' experience and one licensed practical nurse from a list of three or more with at least three years' experience

(NOTE: These names are submitted to the governor from their respective professional organizations.)

V. Legal functions of state boards of nursing

A. Administer the laws of the state pertaining to nursing

B. Prescribe curricula and standards for schools of nursing

C. Survey schools of nursing for accreditation purposes

D. Examine, license, and renew licenses of qualified applicants

E. Conduct hearings or charges calling for discipline of a license

F. Have the power to suspend or revoke a license

G. Have the power to call persons to give evidence at a hearing and to administer an oath to said persons

H. Are responsible for the prosecution of anyone violating the nurse practice acts

I. Protect the legal rights and legal status of licensed nurses

INFORMATION SHEET

VI. Legal responsiblities of the licensed practical nurse (Assignment Sheet #1)

(NOTE: This list of responsibilities comes from the Oklahoma State Board of Nursing. Because of the expanded roles LPNs are assuming, this list may need updating from time to time. Job descriptions at various facilities will identify functions.)

A. Practical nurses will not legally be permitted to use the title *licensed practical nurse* or accept or require the pay of a licensed practical nurse if they are not in fact licensed by a state board of nursing in the states in which they practice

(NOTE: This is known as *permissive licensure*.)

B. Current licensure in any state is accepted in federal institutions and military service

C. Licensed practical nurses are prepared mainly to give supervised nursing care to patients whose condition is not complicated by subtle or serious physiological or psychological conditions

D. Licensed practical nurses are permitted to administer medications in some states

(NOTE: Licensed practical nurses are permitted to administer medications in Oklahoma.)

VII. Qualifications of the licensed practical nurse as stated in the Oklahoma Nursing Practice Act

A. Good moral character

B. Two years high school or its equivalent

C. Completion of a prescribed curriculum in a state-approved program of practical nursing with diploma or certificate

D. Other reasonable preliminary qualification requirements as prescribed by the Oklahoma Board of Nurse Registration and Nursing Education concerning education, maturity, and aptitude

E. Passing a written examination in subjects required by the Oklahoma Board of Registration

(NOTE: Upon passing the examination, the board shall issue a license to practice as a licensed practical nurse. Such license entitles the person to use the title *Licensed Practical Nurse* and to use the letters *LPN* after his or her name. In some states the title *Licensed Vocational Nurse* or *LVN* is used.)

INFORMATION SHEET

VIII. Legal implications concerning licensure of nurses

A. Legal title cannot be borrowed, loaned, or assumed

B. Unqualified persons who use a legal title can be prosecuted

(NOTE: Each nurse should assume the responsibility of notifying the State Board of Nursing of any unlicensed person who is practicing nursing. In some states failure to report these persons can result in punishment by fine or imprisonment.)

C. Not all states require a license to practice or mandatory licensure; in states with permissive licensure a person can practice without a license but cannot use the title LPN or LVN

D. A female applicant may choose to be licensed in her maiden name or her married name

E. The license name must be used by the licensee in all representations to the public

IX. Legal responsibilities in specific situations

A. Good Samaritan action--Expects that persons rendering assistance in an emergency situation without proper equipment will act in a reasonable and prudent manner

(NOTE: A higher standard of medical aid is usually expected from a nurse, physician, rescue personnel, and others specially trained in first aid.)

B. Patient's consent--Written permission must be obtained for any procedure, treatment, or medication administered after a full explanation is given and understood by patient

(NOTE: If a patient refuses to sign a permit it must be reported immediately to the proper person. If the patient is unable to sign the form, then next of kin may give permission in an emergency. Nurses should be aware of what age a person is considered a minor in their state and act accordingly.)

C. Assault and battery--Unauthorized medical or nursing treatment can bring this charge when patient has not given consent for treatment

D. Child abuse or the battered child--Hospitals are legally responsible for reporting suspected cases to the designated law enforcement or health and welfare agency

(NOTE: Any health personnel who makes the report is given legal impunity.)

INFORMATION SHEET

E. False imprisonment--Unnecessary use of physical restraints by hospital personnel; keeping a patient in a health care facility against his or her will

(NOTE: In many instances it will be necessary to restrain patients who are not competent and may injure themselves. Check the restraints frequently to make sure there is not an impairment of circulation or other adverse effects. Be sure to document all circumstances.)

F. Defamation--Disparaging statements which may endanger reputation can be considered a legal cause for lawsuit if heard or read by a third person

(NOTE: Before you say anything or write anything, think about the way it sounds. If you question the content either say NOTHING or rephrase your statement.)

G. Invasion of privacy and freedom of information--Giving out facts that could harm a patient in any respect or failure to knock before entering the room could be considered as a legal cause for lawsuit

(NOTE: A nurse may discuss a patient's condition with another nurse or staff member as part of a professional responsibility in providing continuity of care. As long as the discussion concerns medical treatment and nursing care, there is no invasion of privacy. Exchanging information about the patient's private and personal life may constitute an invasion of privacy.)

X. Causes for revoking a license as stated in the Oklahoma Nursing Practice Act

A. Person is guilty of fraud or deceit in procuring or attempting to procure a license

B. Person is guilty of felony or of gross immorality that would constitute a felony under the laws of the state

C. Person is unfit or incompetent by reason of gross negligence, disreputable habits, or other like causes

D. Person is judicially determined to be mentally incompetent

E. Person is habitually intemperate or addicted to the use of habit-forming drugs

F. Person is guilty of willfully or repeatedly violating any of the provisions of the Nursing Practice Act

LEGAL AND ETHICAL RESPONSIBILITIES
UNIT V

ASSIGNMENT SHEET #1--DEVELOP EXAMPLES OF THE FUNCTIONS OF THE LICENSED PRACTICAL NURSE

NAME ______________________________ SCORE ______________

The National Federation of Licensed Practical Nurses has written a statement concerning functions of the LPN. To become thoroughly aware of the roles an LPN plays, you should have full understanding of these functions. As you read through this list of functions think about what the words are saying. Develop an example of every function. Write these examples in the space provided. Then discuss them in class and compare examples.

Function: Understanding of human relationships between and among patients, families, and personnel

Example: To carry out nursing care based on the knowledge that not only is the patient an important person to consider, but that families and other personnel should be included in the total care of the patient

A. Participates in the planning, implementation, and evaluation of nursing care in complex situations, and in giving nursing care in simple situations by:

1. Providing for the emotional and physical comfort and safety of patients through:

Function: Understanding of human relationships between and among patients, families, and personnel

Example: ____

____

____

Function: Recognizing and understanding cultural backgrounds and spiritual needs; respecting the religious beliefs of individual patients

Example: ____

____

____

ASSIGNMENT SHEET #1

Function: Recognizing and understanding the effects of social and economic problems upon patients

Example: ____

____

____

Function: Protecting patients from behavior that would damage their self-esteem or relationship with family, other patients, or personnel

Example: ____

____

Function: Participating in the development, revision, and implementation of policies and procedures designed to insure comfort and safety of patients and personnel

Example: ____

____

Function: Assisting the patient with activities of daily living and encouraging appropriate self-care

Example: ____

____

Function: Considering needs of the patient for an attractive, comfortable, and safe environment

Example: ____

____

2. Observing, recording, and reporting to the appropriate person:

Function: General physical and mental condition of the patients or signs and symptoms that may be indicative of change

Example: ____

____

Function: Stresses in human relationships between patients and patients' families, visitors, and hospital personnel

Example: ____

____

ASSIGNMENT SHEET #1

3. Performing nursing procedures for which the preparation of the Licensed Practical Nurse has provided the necessary degree of skill and judgment, such as:

Function: Administration of medications and treatments prescribed for the patient

Example: ______________________________

____

Function: Preparation and care of patients receiving specialized treatments

Example: ______________________________

____

Function: Performance of special nursing techniques in caring for patients with communicable diseases

Example: ______________________________

____

Function: Practice of first aid measures

Example: ______________________________

____

Function: Preparation and care of equipment for treatments, including sterilization and observation of sterile techniques

Example: ______________________________

____

4. Assisting with the rehabilitation of patients according to the patient care plan through:

Function: Awareness of and encouragement of the interests and special aptitudes of patients

Example: ______________________________

____

Function: Encouraging patients to help themselves within their own capabilities in performing activities of daily living

Example: ______________________________

____

ASSIGNMENT SHEET #1

Function: Knowledge and application of the principles of prevention of deformities, the normal range of motion, body mechanics, and body alignment

Example: ____

____

Function: Utilizing the community resources and facilities for continuing patient care

Example: ____

____

B. Promotes effectiveness of the employing health service agency through:

1. Utilizing opportunities in contacts with patient's relatives to promote better understanding of policies pertaining to the health service

   Example: ____

   ____

2. Fostering cooperative effort through understanding the functions of all personnel involved in patient care

   Example: ____

   ____

3. Utilizing community resources and relationships for better understanding by the public of health services

   Example: ____

   ____

LEGAL AND ETHICAL RESPONSIBILITIES
UNIT V

TEST

NAME ______________________________ SCORE ______________

1. Match terms associated with legal and ethical responsibilities to the correct definitions. Write the correct numbers in the blanks.

______ a. Action for which a person or thing is specially fitted or used

______ b. Legal document granted by a designated authority to permit a person to practice an occupation

______ c. State of being held accountable for something

______ d. Act of carrying out

______ e. Requirement; a condition that must be complied with

______ f. Of or relating to the principles of right and wrong in behavior

______ g. To annul or call back

______ h. Given to excessive indulgence of appetite or desire

______ i. Deceit or trickery

______ j. Serious crime punishable by law with penalties ranging from imprisonment for more than one year to death

______ k. Inadequate or unqualified

______ l. Of poor character; not decent

______ m. Government agency that grants nursing licenses and administers nursing practice acts

______ n. Rules of good conduct drawn up by an individual group; reflects the highest ideals of the group

1. Incompetent
2. Revoke
3. Function
4. Board of nursing
5. Responsibility
6. Moral
7. Implementation
8. License
9. Code of ethics
10. Intemperate
11. Disreputable
12. Qualification
13. Fraud
14. Felony

______o. Laws of a state which exempt from liability for damages persons who in good faith give emergency care to an injured person at the scene of an accident or other casualty

______p. Threat or an attempt to contact the body of another person without actually doing so and without consent; threat to use force

______q. Actual use of force or merely touching someone against the will of that person

______r. Exemption or freedom from punishment

______s. To harm the reputation of someone or something by libel or slander

______t. Failure to do what a person of ordinary judgement or prudence would do or doing what a reasonable person would not do

______u. Negligent acts of persons who have had specialized professional education and training

______v. Private or secret

______w. Civil wrong arising from a person's failure to use care in contact with other persons, or failure to refrain from injuring the person or property of another

______x. Formal recognition of nursing qualifications from state to state

15. Assault
16. Battery
17. Good Samaritan Statutes
18. Impunity
19. Confidential
20. Malpractice
21. Defamation
22. Negligence
23. Tort
24. Interstate endorsement

2. Distinguish between the terms *legal* and *ethical*. Write an "X" in the blank by the definition for "ethical."

______a. Accepted professional standards of conduct; may not necessarily be considered illegal

______b. Pertains to rules or the law; one who does not conform may be held accountable for actions and formally punished

3. Select from the following list legal responsibilities of the student nurse. Write an "X" in the correct blanks.

______a. A student nurse should be familiar with the rules and regulations of the institutions in which she or he is a student and should follow them exactly

______b. Student nurses may in emergency situations give first aid and be covered by the Good Samaritan Law ______c. Students should perform whatever procedures they feel are necessary

______d. Student nurses should prescribe medications

______e. Responsibility for action is assumed in some instances by the employing institution and/or the patient's doctor

______f. Responsibility is assumed by the student, the nursing supervisor, and the nursing instructor

4. Describe below the Oklahoma Board of Nurse Registration and Nursing Education.

____

____

____

____

____

____

5. Select from the following list legal functions of state boards of nursing. Write an "X" in the correct blanks.

______a. Administer the laws of the state pertaining to nursing

______b. Change hospital procedures to meet nurses' needs

______c. Examine, license, and renew licenses of qualified applicants

______d. Have the power to suspend or revoke a license

______e. Enforce the cleanliness and dress codes for nurses

______f. Require membership in organizations

______g. Survey schools of nursing for accreditation purposes

______h. Have the power to call persons to give evidence at a hearing and to administer an oath to said persons

______i. Prescribe curricula and standards for schools of nursing

______j. Conduct hearings or charges calling for discipline of a license

______k. Protect the legal rights and legal status of licensed nurses

______l. Are responsible for the prosecution of anyone violating the nurse practice acts

6. Discuss legal responsibilities of the licensed practical nurse.

____

____

____

____

____

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____

7. Describe qualifications of the licensed practical nurse as stated in the Oklahoma Nursing Practice Act.

____

____

____

____

____

____

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____

____

____

8. Select from the following list legal implications concerning licensure of nurses. Write an "X" in the correct blanks.

_____ a. Once you are licensed, you are automatically licensed in all states

_____ b. Unqualified persons who use a legal title can be prosecuted

_____ c. A female applicant may choose to be licensed in her maiden name or her married name ______d. Legal title cannot be borrowed, loaned, or assumed

______e. Requirements for licensure are the same in each state

______f. The license name must be used by the licensee in all representations to the public

______g. Not all states require a license to practice or mandatory licensure; in states with permissive licensure a person can practice without a license but cannot use the title LPN or LVN

9. Match legal responsibilities in specific situations to the correct definitions. Write the correct numbers in the blanks.

______a. Hospitals are legally responsible for reporting suspected cases to the designated law enforcement or health and welfare agency

______b. Expects that persons rendering assistance in an emergency situation without proper equipment will act in a reasonable and prudent manner

______c. Written permission must be obtained for any procedure, treatment, or medication administered after a full explanation is given and understood by patient

______d. Unauthorized medical or nursing treatment can bring this charge when patient has not given consent for treatment

______e. Unnecessary use of physical restraints by hospital personnel; keeping a patient in a health care facility against his or her will

______f. Disparaging statements which may endanger reputation can be considered a legal cause for lawsuit if heard or read by a third person

______g. Giving out facts that could harm a patient in any respect or failure to knock before entering the room could be considered as a legal cause for lawsuit

1. Assault and battery
2. Child abuse or the battered child
3. Good Samaritan action
4. Invasion of privacy and freedom of information
5. Patient's consent
6. Defamation
7. False imprisonment

10. Select from the following list causes for revoking a license as stated in the Oklahoma Nursing Practice Act. Write an "X" in the correct blanks.

______a. Person is unfit or incompetent by reason of gross negligence, disreputable habits, or other like causes

______b. Person is actively campaigning in politics _____c. Person is guilty of fraud or deceit in procuring or attempting to procure a license

_____d. Person is guilty of willfully or repeatedly violating any of the provisions of the Nursing Practice Act

_____e. Person uses his or her name and title in advertising products

_____f. Person is guilty of felony or of gross immorality that would constitute a felony under the laws of the state

_____g. Person is judicially determined to be mentally incompetent

_____h. Person is habitually intemperate or addicted to the use of habit-forming drugs

_____i. Person is excessively absent

11. Develop examples of the functions of the licensed practical nurse.

(NOTE: If activity 11 has not been finished before the test, ask the instructor when it should be completed.)

LEGAL AND ETHICAL RESPONSIBILITIES
UNIT V

ANSWERS TO TEST

1.

a.	3	j.	14	s.	21
b.	8	k.	1	t.	22
c.	5	l.	11	u.	20
d.	7	m.	4	v.	19
e.	12	n.	9	w.	23
f.	6	o.	17	x.	24
g.	2	p.	15		
h.	10	q.	16		
i.	13	r.	18		

2. a

3. a, b, e, f

4. Description should include:

   a. Members of the board consist of five registered nurses who serve for five years and who make and adopt all rules and regulations concerning nursing practice and education

   b. Three licensed practical nurses function with the board to act on matters pertaining to the licensing and education of practical nurses

   c. Each year the governor appoints one registered nurse from a list of five or more with at least five years' experience and one licensed practical nurse from a list of three or more with at least three years' experience

5. a, c, d, g, h, i, j, k, l

6. Discussion should include:

   a. Practical nurses will not legally be permitted to use the title *licensed practical nurse* or accept or require the pay of a licensed practical nurse if they are not in fact licensed by a state board of nursing in the states in which they practice

   b. Current licensure in any state is accepted in federal institutions and military service

c. Licensed practical nurses are prepared mainly to give supervised nursing care to patients whose condition is not complicated by subtle or serious physiological or psychological conditions

d. Licensed practical nurses are permitted to administer medications in some states

7. Description should include:

   a. Good moral character

   b. Two years high school or its equivalent

   c. Completion of a prescribed curriculum in a state-approved program of practical nursing with diploma or certificate

   d. Other reasonable preliminary qualification requirements as prescribed by the Oklahoma Board of Nurse Registration and Nursing Education concerning education, maturity, and aptitude

   e. Passing a written examination in subjects required by the Oklahoma Board of Registration

8. b, c, d, f, g

9. a. 2

   b. 3

   c. 5

   d. 1

   e. 7

   f. 6

   g. 4

10. a, c, d, f, g, h

11. Evaluated to the satisfaction of the instructor

NURSING TRENDS
UNIT VI

UNIT OBJECTIVE

After completion of this unit, the student should be able to function as an effective health care team member. The student should also be able to be a resource person for those persons needing assistance with a health problem. This knowledge will be evidenced by completion of assignment sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the health care team to the correct definitions.
2. Match events occurring in the evolution of nursing to their time periods.
3. Describe the events that brought about the area of practical nursing.
4. Match the names of historical health care contributors to their accomplishments.
5. List major trends affecting changes in health care.
6. Describe factors affecting the types of educational opportunities in nursing.
7. Match levels of nursing to the educational requirements.
8. List classifications of hospitals.
9. Complete a hospital organizational chart.
10. Match health care team members in the hospital to their functions.
11. Describe various trends in nursing care patterns.
12. List special care units that may be found in health facilities.
13. Select from a list reasons for being active in the community.
14. Describe functions of nurses' organizations.
15. Distinguish between voluntary and official agencies and organizations.
16. List services provided through Planned Parenthood groups.
17. Select from a list services offered through a guidance clinic.

18. List common problems that can occur in every community.

19. Complete listing of hospital personnel.

20. Interview a health care team member.

21. Research functions of an organization or agency.

22. Prepare to be a resource person.

23. Analyze collected data on a current national health issue or problem.

NURSING TRENDS
UNIT VI

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

  A. Provide student with objective sheet.

  B. Provide student with information and assignment sheets.

  C. Discuss unit and specific objectives.

  D. Discuss information and assignment sheets.

  E. Assign posters to be made depicting different eras in nursing history.

  F. Check nursing journals for pictures of nursing uniforms worn in the different stages of nursing history and discuss the differences in today's uniforms.

  G. Show filmstrip *Making the Difference*.

  H. Invite resource persons from institutions that offer different types of nursing patterns to discuss their particular type of patient care.

  I. Discuss the various educational opportunities in your locality for nursing education.

  Example: Visit a junior college program, baccalaureate program or have guest speakers

  J. Discuss the different types of hospitals or clinics in your community.

  K. Conduct a scavenger hunt and send students to the various areas of the hospital to either locate a piece of equipment or bring back an article.

  (NOTE: Arrange this hunt with the hospital in advance. This will help the student become further acquainted with all the areas of the hospital.)

  L. Give direction to students on how to arrange their interview with a health care team member.

  (NOTE: If your hospital is small, you may want to assign two or three students to one person for an interview. If you have a larger hospital, the students may be able to choose the team member. You may want them to go out to offices and clinics for different types of health-care worker interviews.)

  M. Invite department heads from the various units to speak to class about their special areas and give the students an idea of what to expect when they are assigned to that area.

N. Take a field trip to one or two of the health-related agencies in your community to acquaint the students with the services provided.

O. Invite persons from other health resource areas to speak to the class about the organizations they represent.

P. Provide information needed to complete assignment sheets.

Q. Give test.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Assignment sheets

1. Assignment Sheet #1--Complete Listing of Hospital Personnel
2. Assignment Sheet #2--Interview a Health Care Team Member
3. Assignment Sheet #3--Research Functions of an Organization or Agency
4. Assignment Sheet #4–Prepare to be a Resource Person
5. Assignment Sheet #5--Analyze Collected Data on a Current National Health Issue or Problem

D. Test

E. Answers to test

III. Unit references:

A. Ross, Carmen F. *Personal and Vocational Relationships in Practical Nursing.* Philadelphia: J.B. Lippincott Company, 1969.

B. Rogers, Helen. *Nursing I: A Course of Study.* Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

C. Sloan, Jamee. *Health Service Careers.* Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1979.

D. Deloughery, Grace L. *History and Trends of Professional Nursing.* St. Louis: C.V. Mosby, 1977.

IV. Additional references:

A. Krepps, K. "Practical Nursing: Past, Present and Future." *Journal of Nursing Care,* (1978), p. 13.

(NOTE: This is an article that follows the nursing profession through its early beginnings to the present and looks at the future. Pictures depict types of uniforms throughout history.)

B. Following are addresses for the nurses' organizations mentioned in this unit. Information is available free.

1. NLN, 10 Columbus Circle, New York, New York 10019.
2. ANA, 2420 Pershing Road, Kansas City, Missouri 64108.
3. NFLPN, 888 Seventh Avenue, New York, New York 10019.
4. NAPNES, 122 East 42nd Street, New York, New York 10017.

V. Film--*Florence Nightengale and the Founding of Professional Nursing.* Available from Metropolitan Life Insurance Company, Health and Safety Education Division, One Madison Avenue, New York, New York 10010.

VI. Filmstrip--*Making the Difference.* Color filmstrip available from the J. B. Lippincott Company, East Washington Square, Philadelphia, Pennsylvania 19105.

(NOTE: You may also call 215-574-4200 to request this film, which celebrates the first 100 years of nursing in America.)

NURSING TRENDS
UNIT VI

INFORMATION SHEET

I. Terms associated with the health care team

A. Immunization–Method through which people can be protected from disease, especially infectious disease

(NOTE: Immunity can be natural, acquired, active, or passive.)

B. Official/public agencies–Supported through public funds from government taxes and administered by appointees of the federal, state, or local government

C. Department of Health and Human Services–Official federal agency that sets up and directs programs to help improve the conditions of life for each individual and as a national family

(NOTE: There are many subdivisions of this department that handle specific needs.)

D. Social Security System--National system to provide health, old age, survivors, and disability insurance that covers all people who work outside the home for a living

E. Medicare--Health insurance plan promoted by the government to aid people 65 or older

F. Social and Rehabilitation Services--Division of the Department of Health and Human Services organized to set up programs to aid handicapped and disabled individuals

(NOTE: Training programs are set up to teach employable skills and health care, and rehabilitative equipment is fitted to give independence and facilitate movement for individuals.)

G. Food and Drug Administration (FDA)--Administers and enforces many acts that promote purity of products and truthful, informative labeling

Examples: Food, Drug and Cosmetic Act; Fair Packaging and Labeling Act; Caustic Poison Act

H. Public Health Service--Provides programs for research and gives grants to states for health services; provides training programs to improve health in local communities; offers medical and psychiatric examinations

I. State Health Department--Provides health education materials, including films, pamphlets, books, and folders on various health subjects

(NOTE: The State Health Department may be responsible for licensing embalmers, manufacturers of narcotics and other controlled drugs, hospitals, nursing homes, and other agencies.)

INFORMATION SHEET

J. Local health department--Provides many services to local communities, such as immunizations, reporting communicable diseases, public health nursing, health education, environmental sanitation, and maternal and child health services

K. World Health Organization (WHO)--Special agency of the United Nations that works throughout the world to raise health standards

(NOTE: Control of communicable diseases is WHO's main goal.)

L. Private and voluntary health agencies--Organizations that receive support from sources such as United Fund, donations, gifts, endowments, membership fees, and sometimes public funds

(NOTE: These agencies are usually administered by a board of directors who volunteer their services. They include the American Dietetic Association, American Medical Association, American Hospital Association, and many others.)

M. Alcoholics Anonymous--Voluntary organization made up of former alcoholics who help other alcoholics help themselves

(NOTE: Al-anon is a group that works with families of alcoholics and Alateen is primarily for the children of alcoholics. Both groups strive to learn how to live with the alcoholic, but not to cure him or her; only the alcoholic can decide to quit drinking.)

N. American Cancer Society--Educates the public and supports facilities for the detection, diagnosis, and treatment of cancer

(NOTE: Groups form through the American Cancer Society to work with specific problem areas. Such groups include Reach to Recovery, Laryngectomy Club, and the Ostomy Club.)

II. Events occurring in the evolution of nursing

A. Ancient civilization--Medicine of a kind was practiced by physicians and nursing procedures were done but record of who performed these acts has not been found

B. Early Christian times--Organized nursing developed and was carried out by orders of women as a service to the churches

(NOTE: The nurse's uniform originated from the habit worn by nursing nuns and progressed to what it is now.)

C. Dark Ages--Several great hospitals were founded by religious orders and learning took place in convents and monasteries

INFORMATION SHEET

D. Middle Ages--Monks and nuns were still responsible for most nursing but occasionally highborn ladies renounced their heritage and worked with the poor and sick

Examples: Saint Catherine, Clara of Assisi, Agnes of Bohemia

(NOTE: This is the time of St. Francis of Assisi who founded the Franciscan order which was committed to wandering, poverty, preaching, and caring for the sick and destitute.)

E. Reformation--Medicine progressed slowly and nursing declined until the nineteenth century

(NOTE: The decline in nursing occurred due to the religious upheaval and the reduction of nursing orders of monks and nuns.)

F. Modern nursing--In 1836, the first organized school of nursing was founded at Kaiserswerth, Germany, to formally educate nurses in principles of nursing

(NOTE: Florence Nightengale, who was instrumental in making the nursing profession the highly respected career it is today, was a student at this school.)

III. Events that brought about the area of practical nursing

A. In 1893, Ballard School, New York, opened the first practical nursing school with a three-month course of instruction

B. In 1946, the American Nurses' Association recommended that each state consider legislation for the licensure of the practical nurse

C. In 1957, the National League for Nurses established the Council on Practical Nursing

IV. Historical health care contributors

A. Florence Nightengale--Founder of modern nursing; organized and developed a group of skilled nurses who set standards for modern nursing skills

(NOTE: After her work in the Crimean War, Nightengale wrote a book on nursing entitled *Notes on Nursing,* emphasizing that nurses should work in hospitals rather than do private duty in homes because nursing was a sacred calling, and not a business.)

B. Dorothea Dix--Superintendent of U.S. Army Nursing during the Civil War and a leader in correcting the cruel and unjust treatment of the insane

C. Linda Richards--First trained nurse in America and organizer of school of nursing at Massachusetts General Hospital

2

INFORMATION SHEET

D. Mary Mahoney--First black woman to graduate from a school of nursing; later became a well-known teacher

E. Clara Barton--Organized the American Red Cross

F. Annie W. Goodrich--First director of the Army School of Nursing in 1918

G. Lillian Wald--Founded the Henry Street Settlement in New York, a pioneer visiting nurse service

H. M. Adelaide Nutting--Established the first college-level nursing course at Columbia University in 1907

I. Frances Payne Bolton--Established the Cadet Nurse Corps in 1943

J. Sairy Gamp--Character from a Charles Dickens novel who was portrayed as an ill-kept, uneducated, rather unethical woman hired to care for the ill

(NOTE: Sairy Gamp was a fictitious character who Dickens wrote about to illustrate what a nurse should *not* be. Another Dickens character, equally disreputable, was Betsy Prigg. She was an example of a hospital nurse. So if someone tells you, "You look Gampy today," don't take it as a compliment. Something must be wrong!)

K. Hippocrates--Greek physician known as the "Father of Medicine"

L. Joseph Lister--Known as the "Father of Modern Aseptic Surgery;" worked to eliminate infection based on the knowledge of bacteria as a pathological agent

V. Major trends affecting changes in health care

(NOTE: Health care patterns have changed rapidly throughout the ages and will continue to change due to many factors that take place in the world each day. The improvement of health care today depends on the progress made to update ideas, re-evaluate methods, and invent new equipment and systems to meet the needs of people.)

A. New research and knowledge

B. Basic change in attitudes toward health

(NOTE: More people are aware of health issues than ever before. Each day mass media has at least one new issue, item, or problem that is heard or read by millions of people. People are demanding more information and becoming more knowledgeable about drugs, types of treatment, and preventive methods. Emphasis is on prevention of disease and promotion of good health care practices.)

INFORMATION SHEET

C. Supply and distribution of health care personnel

(NOTE: Some metropolitan areas have a supply of top quality health workers but rural areas are still in need.)

D. Decreased hospitalization and more out-patient care centers

(NOTE: Health care costs are soaring in today's inflation-stressed world, and more people are avoiding hospitalization if it is at all possible. Out-patient surgery and home deliveries are becoming very popular. Health care is more family-centered.)

E. Population trends such as fewer births and increased longevity

(NOTE: Concern for the older citizens has become a priority because of the increase in longevity. More health care workers will be concerned with their care in the future.)

F. Increased interest in preventive health care

G. Continued emancipation of women

(NOTE: More women are taking other executive or traditionally male jobs.)

H. More males in nursing

(NOTE: More men are going into nursing because of the wide range of opportunities available in the field.)

I. Growth of junior colleges providing more opportunities for education in health fields

VI. Factors affecting the types of educational opportunities in nursing

A. Concern for updating and upgrading the quality of nursing care

B. Shortage of nurses in some populations has influenced the number of programs to produce nurses in a shorter period of time

C. Legislature has examined the overall health care system and established set standards for practice

D. Stronger influence from nursing associations

E. Attempt to provide opportunity for nurses already educated to move into other levels of nursing by a variety of methods and alternatives

Examples: Open curriculum, articulation, challenge exams, career mobility, upward mobility, ladder or lattice concept

INFORMATION SHEET

F. Additional education to prepare for areas of specialization

(NOTE: Nurses are preparing to take more independent roles in the health care service areas. Nurse mid-wives are reappearing and positions are developing in specialized areas producing nurse clinicians with new titles and practitioners.)

VII. Levels of nursing and the educational requirements

A. Nursing assistant--Program offered in vocational school, hospital, or other health agency; lasts various lengths of time depending on the type of experience needed

(NOTE: If facility is more specialized, such as a psychiatric hospital, or if assistant will be working in specialty areas where more expertise is needed, the length of the program will differ.)

B. Practical nurse--Program offered in vocational school, hospital, or community college; usually one year in length

(NOTE: Graduates may write the state board exam to become licensed. In some states additional courses may be needed to prepare nurse for specialized areas.)

C. Associate degree nurse--Two-year program based in a junior college; includes college academics and clinical experience

D. Diploma nurse--Program based in a hospital; may require one year of college academics and two years within the hospital setting

(NOTE: Some hospitals still offer the academic subjects within the hospital setting.)

E. Baccalaureate degree nurse--Four-year program offered at the university level

(NOTE: Graduates of the A.D., diploma, and B.S. programs of nursing may write state boards to become licensed as registered nurses.)

VIII. Classifications of hospitals

(NOTE: A hospital may fit into more than one of these classifications.)

A. General and/or acute care

B. Specialized

Examples: Maternity, pediatric, orthopedic, psychiatric, hospices

C. Non-profit

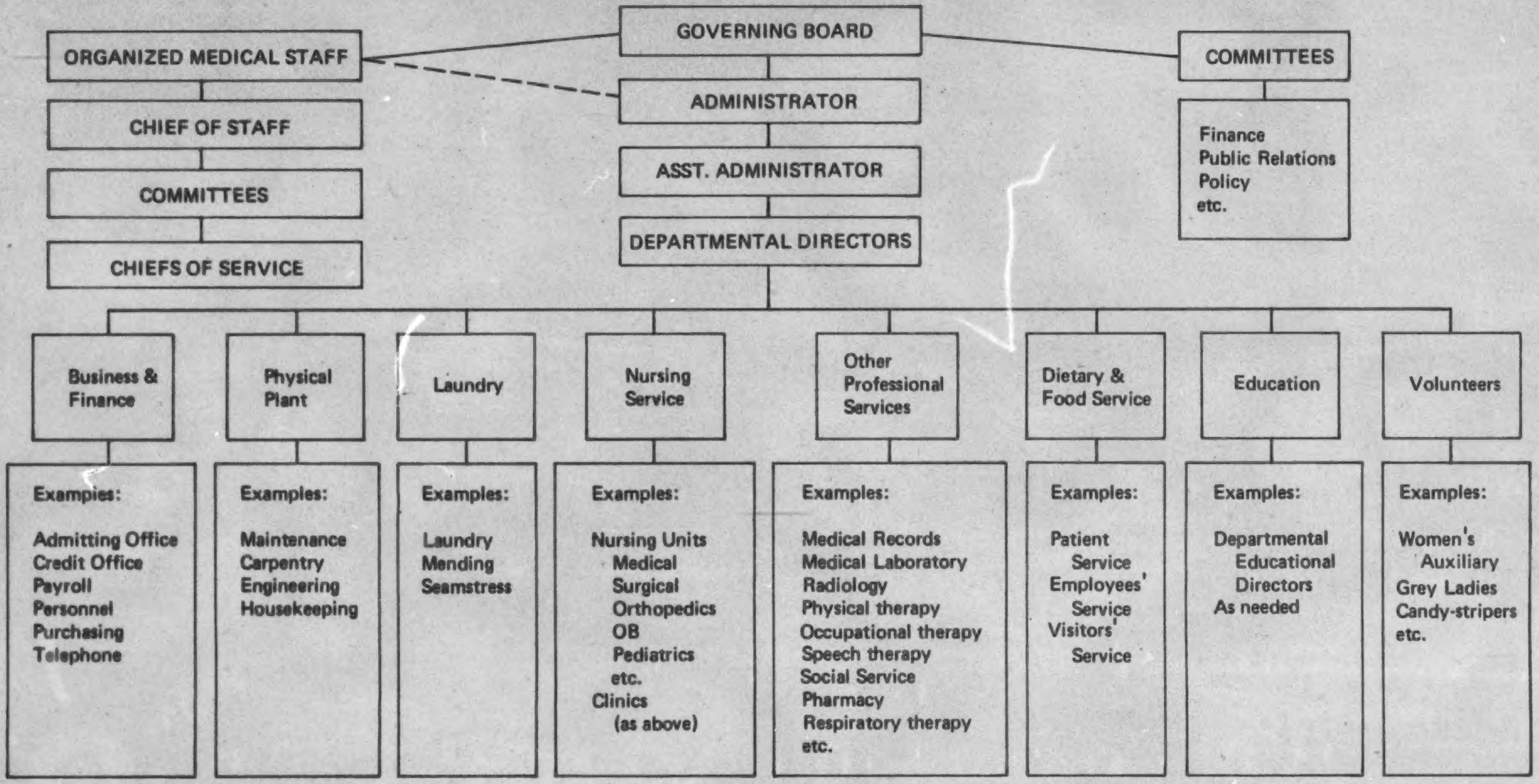
(NOTE: Hospitals may be supported by federal, state, city, or county governments through taxes or by private endowments, universities, or churches.)

D. Privately owned and operated for a profit

INFORMATION SHEET

IX. Hospital organizational chart (Assignment Sheet #1)

Hospital Organization


GOVERNING BOARD
ORGANIZED MEDICAL STAFF
CHIEF OF STAFF
COMMITTEES
CHIEFS OF SERVICE
ADMINISTRATOR
ASST. ADMINISTRATOR
DEPARTMENTAL DIRECTORS
COMMITTEES
Finance
Public Relations
Policy
etc.
Business & Finance
Examples:
Admitting Office
Credit Office
Payroll
Personnel
Purchasing
Telephone
Physical Plant
Examples:
Maintenance
Carpentry
Engineering
Housekeeping
Laundry
Examples:
Laundry
Mending
Seamstress
Nursing Service
Examples:
Nursing Units
Medical
Surgical
Orthopedics
OB
Pediatrics
etc.
Clinics
(as above)
Other Professional Services
Examples:
Medical Records
Medical Laboratory
Radiology
Physical therapy
Occupational therapy
Speech therapy
Social Service
Pharmacy
Respiratory therapy
etc.
Dietary & Food Service
Examples:
Patient Service
Employees' Service
Visitors' Service
Education
Examples:
Departmental Educational Directors
As needed
Volunteers
Examples:
Women's Auxiliary
Grey Ladies
Candy-stripers
etc.

INFORMATION SHEET

X. Health care team members in the hospital and their functions (Assignment Sheet #2)

(NOTE: These are only a few of the areas that make up a health team. Within each department or division there are skilled workers who have expertise in their field and who perform an important function in the care of patients.)

A. Nursing service--Provide direct patient care; responsibilities depend on nursing care patterns, level of expertise, type of unit staffing

Examples: Director of nursing, supervisor or head nurse, staff nurse, charge nurse, unit nurse, team leader, medication nurse, nursing assistant and/or orderly

B. Physician--Diagnose and direct medical care, treatment of disease, and maintenance of health

(NOTE: A physician may be a general practitioner or a specialist in a field who may work in another area of the hospital. For instance, a radiologist is a physician with a specialty in radiology. Physicians may be in a group practice, or another physician may be called in to consult in a case dealing with a special problem.)

C. Laboratory--Obtain and perform tests with a variety of specimens

D. Radiology--Take and evaluate X-rays; provide treatment in some expanded areas

E. Physical therapy--Assist those suffering from disability to regain physical function; rehabilitate

F. Respiratory therapy--Carry out pulmonary function tests and give treatments for respiratory disorders

G. Pharmacy--Prepare medications, give in-service classes on new drugs and administration procedures, and, in many institutions, are a part of the Code Blue team

(NOTE: The Code Blue team is made up of designated health-care personnel who are skilled in various areas and are able to respond to an emergency call, usually a cardiac or respiratory arrest.)

H. Dietetics--Provide nutritional care for patients including education and counseling for specific modifications of diet

I. Medical records--Maintain patients' medical data

J. Housekeeping--Maintain clean, aseptic environment not only for the prevention of the spread of bacteria but to insure patients' comfort

K. Maintenance--Keep all equipment in good repair and manage the overall building effectiveness

INFORMATION SHEET

L. Social services--Provide assistance to patients and families with personal problems

M. Pastoral care--Provide comfort and reassurance for patients and families who need religious counseling and support

(NOTE: Many times social services and pastoral care are combined to make up a department known as *patient relations* or *patient services*.)

N. In-service--Provide update classes for all the various departments of the hospital

O. Pathology--Interpret and diagnose disorders and diseases by looking at the involved tissues

P. Anesthesia--Various levels of people involved with all aspects of administering agents used to produce loss of sensation during procedures that would otherwise be uncomfortable for the patient

XI. Various trends in nursing care patterns

(NOTE: Down through the ages nursing care has changed according to the needs of the patient in each period. Some patterns have truly changed, but others have just taken on new names and new importance for today's society.)

A. Functional nursing--Oldest acceptable form of nursing care; each nursing employee is assigned specific tasks which are carried out on all patients in a unit

Example: The professional nurse may check orders; the licensed practical nurse may give treatments and medications; the aides and the orderlies may make beds, give baths, and distribute meals

B. Team nursing--Team of employees gives care to patient according to their individual capabilities and personalities under the leadership of a professional nurse

(NOTE: The care of the patient is actually planned and carried out by the team members under the supervision of a team leader.)

C. Total patient care--All patient needs are met by one person whether professional or practical

D. Progressive patient care--Made up of four or five units designed to give the patient care to meet his or her needs at that time; patient may move through several units in his or her hospital stay

Example: Intensive/critical care unit, intermediate care unit, self-care unit, long-term unit, home care unit

INFORMATION SHEET

E. Specialized care--Care is provided in areas dealing with a particular diagnosis by persons educated in those areas

Examples: Obstetrics, neonate, nursery, pediatrics, coronary care, medical-surgical, psychiatry

F. Private duty–Care is provided on an individual basis, often on a contract agreement

G. Primary care--Nursing care is coordinated by the same nurse throughout the patient's hospitalization

(NOTE: A further extension of the primary concept is a follow-up done by the nurse either by telephone or in person after the patient returns home.)

H. Home care--Care is provided by health staff that may provide total care on a shift basis or only as a daily or weekly visit to give assistance in specific need areas

I. Holistic care--Provides total care concerning all needs of the individual including physical and psychological aspects

(NOTE: To provide overall quality patient care we need to look not just at diseases, disorders, and anatomical systems, but at the whole person.)

J. Nursing process--Step-by-step progressive course of action designed to evaluate patient's needs

(NOTE: An evaluation is made of the patient as a whole, beginning with an assessment of collected data that is compared against norms. A conclusion is made and nursing intervention or action takes place after careful planning. Evaluation of the actions and response of the patient takes place to determine if action has been beneficial or if changes and adaptations need to be made.)

K. Staffing agency--Private business that provides temporary health care workers for hospitals, offices, or private homes

(NOTE: These employees are paid by the agency and can work as many hours as they desire.)

XII. Special care units that may be found in health facilities

A. Intensive/critical care

Examples: Cardiac, pulmonary, surgical

B. Coronary care

C. Obstetrical and delivery

INFORMATION SHEET

D. Nursery

(NOTE: Nurseries may be divided into newborn, premature, or critical care units.)

E. Psychiatric

F. Emergency care

G. Burn centers

(NOTE: Special areas to treat critically burned patients are found in some hospitals.)

H. Oncology units

(NOTE: Other areas of the hospital may be defined as surgical, orthopedic, pediatric, gynecological, and medical. There are many times that patients with these types of disorders or diseases will be cared for together in one unit.)

XIII. Reasons for being active in the community

A. May provide you with the opportunity to have an impact in health issues

B. Acquire and refine leadership skills

C. Work to improve your community's health

D. Become acquainted with persons who can act as resources for special needs that you or a patient may have

Examples: Family planning centers, county health department, home care health agencies funded by the government

XIV. Functions of nurses' organizations

(NOTE: Each one of these organizations publishes a type of professional journal that presents current articles on the activities of the organization and interesting topics for the health field.)

A. National League for Nursing (NLN)

(NOTE: This non-profit organization consists of professional and practical nurses, nursing assistants, members of allied professions, and other interested citizens.)

1. Work with health care agencies, nursing educational institutions, and communities to improve health care services and nursing education programs
2. Assist in accreditation of programs, consultations, testing, continuing education research, and publications

INFORMATION SHEET

B. American Nurses Association (ANA)

(NOTE: Members of this organization are professional nurses.)

1. Speak for all professional nurses

2. Work in special groups and committees on economic welfare programs, legislation, public relations, and the state boards of nursing

C. National Association for Practical Nurse Education and Service, Inc. (NAPNES, INC.)

(NOTE: Members are professional and practical nurses, physicians, hospital administrators, and other health and welfare workers, as well as interested citizens.)

1. Provide services to practical nurse education and the licensed practical nurse

2. Provide courses for practical nurses on various subjects, aid nursing programs in the planning stages, promote recruitment, and carry on practical nursing curriculum research

D. National Federation of Licensed Practical Nurses, Inc. (NFLPN, INC.)

1. Speak for all licensed practical and vocational nurses

2. Assist in developing policies and programs of NFLPN through the House of Delegates that have been elected from the state association

3. Support and promote practical nursing through continued efforts to provide upgrading and continuing education programs for better quality care

XV. Voluntary and official agencies and organizations (Assignment Sheets #3 and #4)

A. Voluntary

1. American Dietetic Association

2. American Medical Association

3. American Pharmaceutical Association

4. American Cancer Society

5. American Red Cross

6. American Diabetes Association

INFORMATION SHEET

7. American Heart Association

8. National Association for Mental Health

9. Planned Parenthood

10. Parents Without Partners

11. Salvation Army

B. Official

1. Department of Health and Human Services

2. Social and Rehabilitation Services

3. Public Health Service

4. State and local health departments

5. World Health Organization

(NOTE: There are other agencies and organizations that deal with health care, but these are the well-known ones.)

XVI. Services provided through Planned Parenthood groups

(NOTE: Most groups will provide the following services.)

A. Contraception/birth control counseling

B. Referrals for sterilization

C. Genetic counseling

D. Social workers to provide various types of counseling

(NOTE: In dealing with unplanned pregnancies, these counselors can make referrals to available agencies.)

E. Fees either free, if funded by some official agency, or based on a sliding scale

XVII. Services offered through a guidance clinic

A. Individual counseling

B. Marriage counseling

C. Family counseling

D. Group therapy

INFORMATION SHEET

E. Workshops for all ages

F. Psychiatric testing

(NOTE: Clinics can be privately financed by the psychiatrists or psychologists, or they can be state funded. Many university psychology departments have free psychological/psychiatric clinics.)

XVIII. Common problems that can occur in every community (Assignment Sheet #5)

A. Sanitation problems

(NOTE: Each community should have a water purification system and a safe sewage disposal system. Restaurants should be checked frequently for quality of food and health of employees.)

B. Drug abuse

(NOTE: Even a small community is not safe from drug pushers and abusers. Narcotics laws should be followed, and public education on types of drugs should be available.)

C. Natural disasters

(NOTE: Every community should be ready for acts of nature depending on the geographical location. Tornadoes, floods, hurricanes, fire, and earthquakes are just a few. A good defense system and disaster plan involving the entire community should be ready in order to evacuate and treat victims and do whatever it takes to get the community back on its feet. Practice drills should be held frequently.)

D. Pollution

(NOTE: Frequent checks should be made of air content, especially if there are many industry facilities in the community. Water in local streams and lakes should be checked for purity. Litter should be cleaned from all areas and waste disposal areas should be checked for proper methods of elimination.)

E. Crime

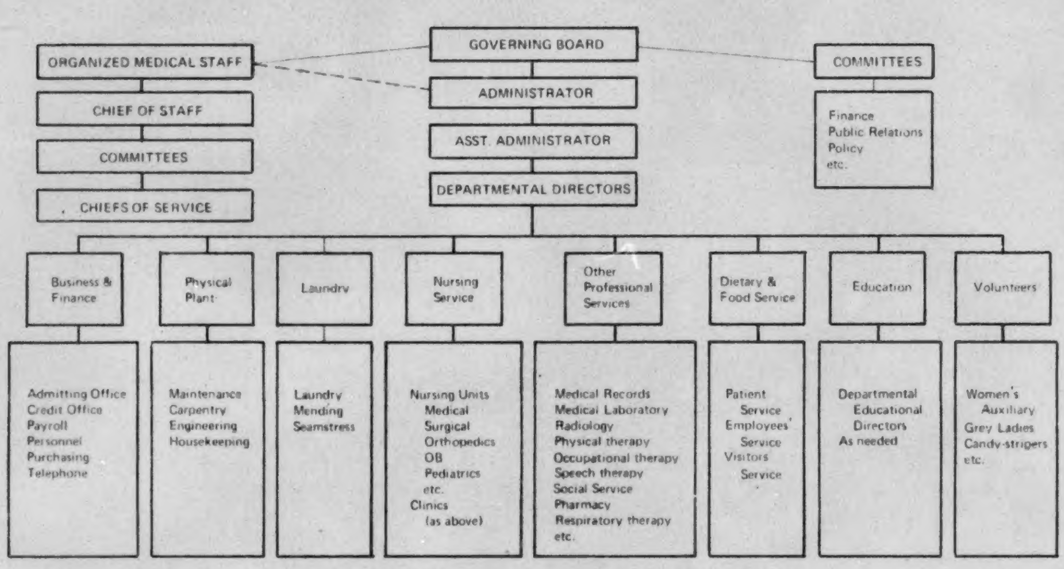
(NOTE: Crime in any community poses problems. Learn how to protect yourself, your family, and your home as well as you can. Be active in community projects to cut down crime. Support the local agency that fights crime in your community.)

NURSING TRENDS
UNIT VI

ASSIGNMENT SHEET #1–COMPLETE LISTING OF HOSPITAL PERSONNEL

NAME ______________________________ SCORE __________

As a student nurse, you will be communicating with many hospital personnel every day and it would be an excellent idea to find out their names. You might even decide to interview one of these persons for Assignment Sheet #2. Fill in the blanks with the name of the person in charge of those departments or areas.


GOVERNING BOARD
ORGANIZED MEDICAL STAFF
COMMITTEES
ADMINISTRATOR
CHIEF OF STAFF
Finance
Public Relations
Policy
etc.
ASST. ADMINISTRATOR
COMMITTEES
DEPARTMENTAL DIRECTORS
CHIEFS OF SERVICE
Business & Finance
Physical Plant
Laundry
Nursing Service
Other Professional Services
Dietary & Food Service
Education
Volunteers
Admitting Office
Credit Office
Payroll
Personnel
Purchasing
Telephone
Maintenance
Carpentry
Engineering
Housekeeping
Laundry
Mending
Seamstress
Nursing Units
Medical
Surgical
Orthopedics
OB
Pediatrics
etc.
Clinics
(as above)
Medical Records
Medical Laboratory
Radiology
Physical therapy
Occupational therapy
Speech therapy
Social Service
Pharmacy
Respiratory therapy
etc.
Patient Service
Employees' Service
Visitors Service
Departmental Educational Directors
As needed
Women's Auxiliary
Grey Ladies
Candy-stripers
etc.

1. Hospital administrator ______________________________
2. Assistant administrator ______________________________
3. Chief of staff ______________________________
4. Finance ______________________________
5. Public relations ______________________________
6. Business office ______________________________
7. Personnel ______________________________
8. Purchasing ______________________________

ASSIGNMENT SHEET #1

9. Payroll ______________________
10. Maintenance department ______________________
11. Laundry ______________________
12. Housekeeping ______________________

NURSING SERVICE

1. Obstetrics ______________________
2. Pediatrics ______________________
3. Nursery ______________________
4. Director of nursing ______________________
5. Assistant director of nursing ______________________
6. Intensive care unit ______________________
7. Other units or floors

	Area	Name
a.		
b.		
c.		
d.		

OTHER PROFESSIONAL SERVICES

1. Medical records ______________________
2. Laboratory ______________________
3. Radiology ______________________
4. Pharmacy ______________________
5. Physical therapy ______________________
6. Respiratory therapy ______________________

ASSIGNMENT SHEET #1

7. Other units

Area	Name
a.	
b.	
c.	
d.	

DIETARY AND FOOD SERVICE--Dietitian ______

EDUCATION

1. In-service education ______
2. Medical library ______

VOLUNTEERS--Volunteer service ______

NURSING TRENDS
UNIT VI

ASSIGNMENT SHEET #2--INTERVIEW A HEALTH CARE TEAM MEMBER

NAME____________________________ SCORE____________________

Health professionals are a very unique group of people. Each member has been educated in a particular area of expertise to insure quality patient care. There are various levels of education within each health group, but all are skilled to perform effective patient care. As a team member you should have knowledge of the other areas besides nursing. A knowledge of the other team members and how they function will help you realize where they fit into the team. Use the questions below to obtain information. Your instructor will give you specific instructions in arranging the interview. Discuss the interview in class and compare notes on other health areas.

INTERVIEW QUESTIONS

Name__________________________ Department____________________

Educational background____________________________________

____

Number of years experience__________________________________

Number of years with this hospital______________________________

Description of job tasks_____________________________________

____

____

How does your job relate to the other health team members?________________

____

Do you plan on continuing your education? In this area or some other related field? ____

Why did you choose this health field?_____________________________

____

Has your field changed in the last few years?_____ If so, how?_______________

____

What, if any, difficulties do you have working with other team members?__________

____

ASSIGNMENT SHEET #2

How do you feel team members could work more effectively with each other?__________

____

How could the team improve patient care in your hospital?__________

____

How do you feel about the new trends in nursing?__________

____

What changes has your hospital made that have changed the type of patient care given?

____

____

____

ANY OTHER QUESTIONS CAN BE ADDED TO THIS SHEET.

NURSING TRENDS
UNIT VI

ASSIGNMENT SHEET #3--RESEARCH FUNCTIONS OF AN ORGANIZATION OR AGENCY

NAME________________________ SCORE______________

As a nurse you will be asked many questions from people asking for help and advice. You need to have a working knowledge of available resources to recommend to those needing assistance. Choose one of the organizations listed on the next page and gather information about its functions, funding, administration, and services offered. Collect pamphlets, obtain films, or have someone from the organization speak to the class or the HOSA chapter. Be sure you ask the following questions plus any additional information you find.

1. What is the main function of the organization?______________
____
____

2. Is it an official organization or a volunteer agency?______________
____
____

3. How is the organization funded?______________
____
____

4. Are the administrators appointed, elected, or hired by the public?______________
____
____

5. What services does the organization or agency provide?______________
____
____

6. What types of career opportunities are available in this agency or organization?
____
____
____

ASSIGNMENT SHEET #3

Below are some examples of organizations and agencies. You may select one of these or choose other interests:

1. State health department
2. Local health department
3. World Health Organization
4. United Fund
5. Alcoholics Anonymous, Alateen, Al-anon
6. American Cancer Society
7. Ostomy Club
8. Laryngectomy Club
9. Reach to Recovery
10. American Diabetes Association
11. American Red Cross
12. Association for the Aid of Crippled Children
13. Family Service Association
14. Muscular Dystrophy Association of America
15. National Association for Mental Health
16. National Council on Aging
17. National Rehabilitation Association
18. National Hemophilia Foundation
19. Parents Without Partners
20. Planned Parenthood
21. Salvation Army
22. United Cerebral Palsy Association
23. United Service Organizations
24. Visiting Nurse Association
25. Birthright

ASSIGNMENT SHEET #3

26. American Heart Association
27. American Lung Association
28. National Foundation of March of Dimes
29. Trauma Society
30. Make Today Count

    (NOTE: This is an organization formed for terminally ill persons to learn to live each day at a time.)

NURSING TRENDS
UNIT VI

ASSIGNMENT SHEET #4--PREPARE TO BE A RESOURCE PERSON

NAME______________________________ SCORE______________

Using the knowledge you have gained about various agencies and organizations, answer the questions following each of the situations below. As a nurse, people will look to you for information when they need help and health care.

1. A new family moves into the neighborhood with several children ranging from about three months to preschool age. The mother asks you about immunizations for the children. They have moved several times in the last three years and haven't had time to find a doctor. Because of the move, their finances are rather tight.

   What agency would you suggest?______________________________

   What immunizations are available?______________________________

   ____

   Will there be a fee?______________________________

   If so, what will it be?______________________________

2. A friend of your family is really having a rough time at home. The father is an alcoholic and is not working. The mother works two jobs, and there are younger children at home.

   What agency or organizations could be of help?______________________________

   ____

   What can be done to help this family?______________________________

   ____

   ____

   ____

3. A close friend confides to you that she may be pregnant. She is afraid to tell her parents and does not know what to do or who to see.

   What agency or organization can help her?______________________________

   What can you tell her that might be of some help?______________________________

   ____

   ____

   ____

   ____

ASSIGNMENT SHEET #4

4. Billie was caught at school with drugs in his possession. He admits to you that he has been abusing hard drugs and wants to stop. His health is poor, and he is making bad grades in school because he often skips class. When he is there, he cannot concentrate.

What agency or organization can help Billie? ______________________

What can you tell him that might help? ______________________

____

____

____

____

5. A distant relative comes to your city with her fiancé and asks for your assistance. They want to get married and would like some counseling about birth control and genetics. Funds are low, and they want to find a place to get blood tests and exams at a low cost.

What agency can help the couple? ______________________

____

6. A classmate of yours confides to you that he may have a venereal disease. He doesn't want to seek medical help for fear that his parents may find out. He tells you his symptoms, and you can see that he is very upset.

What agency can help him? ______________________

Is there a way he can be treated without his parents' consent? ______________________

____

How can you help him? ______________________

____

____

NURSING TRENDS
UNIT VI

ASSIGNMENT SHEET #5--ANALYZE COLLECTED DATA ON A CURRENT NATIONAL HEALTH ISSUE OR PROBLEM

NAME______________________________ SCORE____________________

Pick up any newspaper and you will see articles on major health issues in the nation. Cancer research has decided that almost everything produces carcinogenic chemicals, new methods of birth control for both men and women are being developed, organ transplants are now a reality, and new foods from plants are being developed. These are only a few of the issues we see and hear about each day.

As a person who is knowledgeable about health issues you need to be current in your information and have an idea how you would respond to concerned persons asking your advice. To be as current as possible, you need to learn to read and ask questions of people who are knowledgeable in that area. For every positive approach to an issue you will probably hear negative information. From these sources you must make a decision or at least come to a conclusion about how you feel about the problem.

Choose an issue that interests you. Research the information using at least three sources. These may be newspapers, magazines, or an interview with health professionals in the field. The parts of this assignment are listed below and on the following pages. Follow the directions under each heading.

PART I

After reading articles or discussing the issue with a resource person, write in outline form the most important information below. If it is a problem with a solution, be sure to outline the pros and cons so that you can compare the information at a later date.

SOURCE I

ASSIGNMENT SHEET #5

SOURCE II

SOURCE III

ASSIGNMENT SHEET #5

PART II

Write a short essay about the issue you have chosen to analyze. Compare the various source information. Do they agree or disagree in their problem and solution? What effects will this information have on the general population? How do you feel about this issue? If someone asked you about this issue what would you tell him or her?

NURSING TRENDS
UNIT VI

TEST

NAME______________________________ SCORE______________

1. Match terms associated with the health care team to their correct definitions. Write the correct numbers in the blanks.

_____a. Official federal agency that sets up and directs programs to help improve the conditions of life for each individual and as a national family

_____b. Administers and enforces many acts that promote purity of products and truthful, informative labeling

_____c. Provides many services to local communities, such as immunizations, reporting communicable diseases, public health nursing, health education, environmental sanitation, and maternal and child health services

_____d. Organizations that receive support from sources such as United Fund, donations, gifts, endowments, membership fees, and sometimes public funds

_____e. Educates the public and supports facilities for the detection, diagnosis, and treatment of cancer

_____f. Provides health education materials, including films, pamphlets, books, and folders on various health subjects

_____g. Supported through public funds from government taxes and administered by appointees of the federal, state, or local government

_____h. Health insurance plan promoted by the government to aid people 65 or older

_____i. National system to provide health, old age, survivors, and disability insurance that covers all people who work outside the home for a living

1. Local health department
2. Official/public agencies
3. Department of Health and Human Services
4. Social Security System
5. Medicare
6. American Cancer Society
7. Food and Drug Administration (FDA)
8. Private and voluntary health agencies
9. State Health Department

_____ j. Method through which people can be protected from disease, especially infectious disease

_____ k. Division of the Department of Health and Human Services organized to set up programs to aid handicapped and disabled individuals

_____ l. Voluntary organization made up of former alcoholics who help other alcoholics help themselves

_____ m. Special agency of the United Nations that works throughout the world to raise health standards

_____ n. Provides programs for research and gives grants to states for health services; provides training programs to improve health in local communities; offers medical and psychiatric examinations

10. Immunization
11. World Health Organization (WHO)
12. Public Health Service
13. Alcoholics Anonymous
14. Social and Rehabilitation Services

2. Match events occurring in the evolution of nursing to their time periods. Write the correct numbers in the blanks.

_____ a. In 1836, the first organized school of nursing was founded at Kaiserswerth, Germany, to formally educate nurses in principles of nursing

_____ b. Monks and nuns were still responsible for most nursing but occasionally highborn ladies renounced their heritage and worked with the poor and sick

_____ c. Organized nursing developed and was carried out by orders of women as a service to the churches

_____ d. Medicine of a kind was practiced by physicians and nursing procedures were done but record of who performed these acts has not been found

_____ e. Several great hospitals were founded by religious orders and learning took place in convents and monasteries

_____ f. Medicine progressed slowly and nursing declined until the nineteenth century

1. Ancient civilization
2. Early Christian times
3. Dark Ages
4. Middle Ages
5. Reformation
6. Modern nursing

3. Describe the events that brought about the area of practical nursing.

____

____

____

____

____

4. Match the names of historical health care contributors to their accomplishments. Write the correct numbers in the blanks. Accomplishments are continued on the next page.

_____a. Known as the "Father of Modern Aseptic Surgery;" worked to eliminate infection based on the knowledge of bacteria as a pathological agent

_____b. Established the Cadet Nurse Corps in 1943

_____c. First director of the Army School of Nursing in 1918

_____d. Superintendent of U.S. Army Nursing during the Civil War and a leader in correcting the cruel and unjust treatment of the insane

_____e. Founder of modern nursing; organized and developed a group of skilled nurses who set standards for modern nursing skills

_____f. First black woman to graduate from a school of nursing; later became a well-known teacher

_____g. Established the first college-level nursing course at Columbia University in 1907

_____h. Character from a Charles Dickens novel who was portrayed as an ill-kept, uneducated, rather unethical woman hired to care for the ill

_____i. Founded the Henry Street Settlement in New York, a pioneer visiting nurse service

_____j. First trained nurse in America and organizer of school of nursing at Massachusetts General Hospital

1. Florence Nightengale
2. Dorothea Dix
3. Linda Richards
4. Mary Mahoney
5. Clara Barton
6. Annie W. Goodrich
7. Lillian Wald
8. M. Adelaide Nutting
9. Frances Payne Bolton
10. Sairy Gamp
11. Hippocrates
12. Joseph Lister

_____k. Greek physician known as the "Father of Medicine"

_____l. Organized the American Red Cross

5. List major trends affecting changes in health care.

a. ____

b. ____

c. ____

d. ____

e. ____

f. ____

g. ____

h. ____

i. ____

6. Describe factors affecting the types of educational opportunities in nursing.

7. Match levels of nursing to the educational requirements. Write the correct numbers in the blanks.

______ a. Program offered in vocational school, hospital, or community college; usually one year in length

______ b. Four-year program offered at the university level

______ c. Program offered in vocational school, hospital, or other health agency; lasts various lengths of time depending on the type of experience needed

______ d. Two-year program based in a junior college; includes college academics and clinical experience

______ e. Program based in a hospital; may require one year of college academics and two years within the hospital setting

1. Practical nurse
2. Nursing assistant
3. Diploma nurse
4. Baccalaureate degree nurse
5. Associate degree nurse

8. List classifications of hospitals.

a. ______________________________

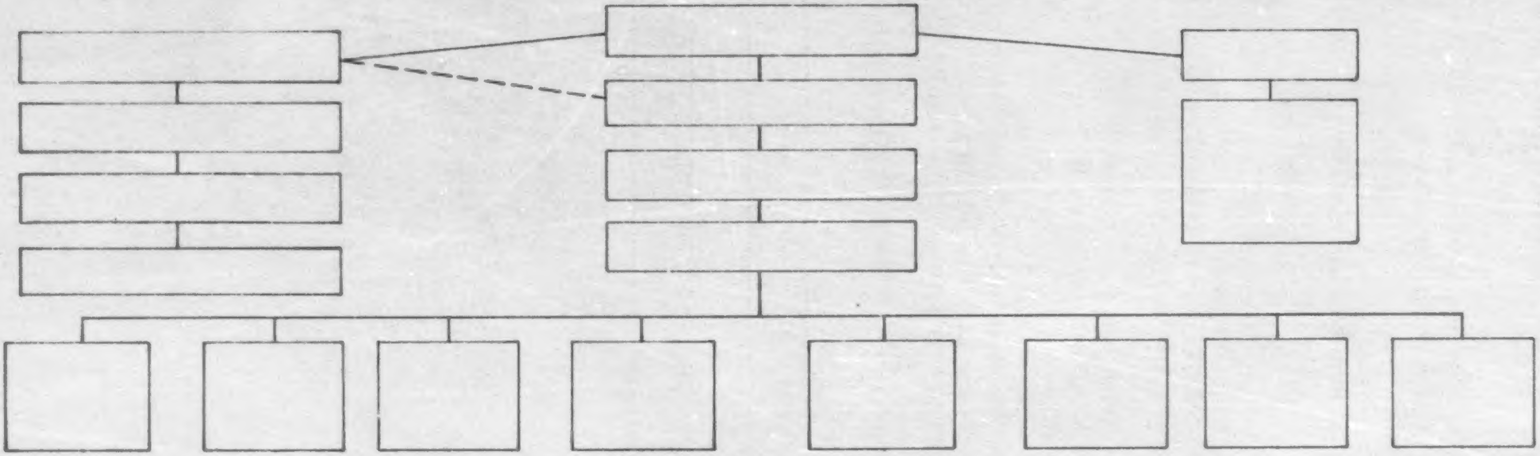
b. ______________________________

c. ______________________________

d. ______________________________

9. Complete the hospital organizational chart below.

Hospital Organization



10. Match health care team members in the hospital to their functions. Write the correct numbers in the blanks. Functions are continued on the next page.

_____a. Various levels of people involved with all aspects of administering agents used to produce loss of sensation during procedures that would otherwise be uncomfortable for the patient

_____b. Provide update classes for all the various departments of the hospital

_____c. Take and evaluate X-rays; provide treatment in some expanded areas

_____d. Diagnose and direct medical care, treatment of disease, and maintenance of health

_____e. Provide nutritional care for patients including education and counseling for specific modifications of diet

_____f. Provide comfort and reassurance for patients and families who need religious counseling and support

_____g. Keep all equipment in good repair and manage the overall building effectiveness

_____h. Provide direct patient care; responsibilities depend on nursing care patterns, level of expertise, type of unit staffing

_____i. Obtain and perform tests with a variety of specimens

_____j. Prepare medications, give in-service classes on new drugs and administration procedures, and, in many institutions, are a part of the Code Blue team

_____k. Interpret and diagnose disorders and diseases by looking at the involved tissues

_____l. Provide assistance to patients and families with personal problems

_____m. Maintain patients' medical data

_____n. Carry out pulmonary function tests and give treatments for respiratory disorders

1. Nursing service
2. Physician
3. Laboratory
4. Radiology
5. Physical therapy
6. Respiratory therapy
7. Pharmacy
8. Dietetics
9. Medical records
10. Housekeeping
11. Maintenance
12. Social services
13. Pastoral care
14. In-service
15. Pathology
16. Anesthesia

_____o. Maintain clean, aseptic environment not only for the prevention of the spread of bacteria but to insure patients' comfort

_____p. Assist those suffering from disability to regain physical function; rehabilitate

11. Describe various trends in nursing care patterns.

a. Functional nursing--____________________

____

____

b. Team nursing--____________________

____

____

c. Total patient care--____________________

____

____

d. Progressive patient care--____________________

____

____

e. Specialized care--____________________

____

____

f. Private duty--____________________

____

____

g. Primary care--____________________

____

____

h. Home care--____________________

____

____

i. Holistic care--____

____

____

j. Nursing process--____

____

____

k. Staffing agency--____

____

____

12. List special care units that may be found in health facilities.

a. ____
b. ____
c. ____
d. ____
e. ____
f. ____
g. ____
h. ____

13. Select from the following list reasons for being active in the community. Write an "X" in the correct blanks.

_____a. Acquire and refine leadership skills
_____b. Acquire prestige
_____c. Work to improve your community's health
_____d. May provide you with the opportunity to have an impact in health issues
_____e. Achieve financial gain
_____f. Become acquainted with persons who can act as resources for special needs that you or a patient may have
_____g. Meet influential people
_____h. Obtain publicity

14. Describe functions of nurses' organizations.

a. National League for Nursing (NLN)--____________________

b. American Nurses Association (ANA)--____________________

c. National Association for Practical Nurse Education and Service, Inc. (NAPNES, INC.)--____________________

d. National Federation of Licensed Practical Nurses, Inc. (NFLPN, INC.)--________

15. Distinguish between voluntary and official agencies and organizations. Write a "V" for voluntary and an "O" for official in the correct blanks.

_____a. American Dietetic Association

_____b. Department of Health and Human Services

_____c. American Heart Association

_____d. American Cancer Society

_____e. American Red Cross

_____f. Public Health Service

_____g. World Health Organization

_____h. American Pharmaceutical Association

_____i. Planned Parenthood

_____j. Salvation Army

_____k. State and local health departments

_____l. American Diabetes Association

_____m. National Association for Mental Health

_____n. Parents Without Partners

_____o. Social and Rehabilitation Services

_____p. American Medical Association

16. List services provided through Planned Parenthood groups.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

17. Select from the list below services offered through a guidance clinic. Write an "X" in the correct blanks.

______a. Marriage counseling

______b. Psychiatric testing

______c. Immunizations

______d. Workshops for all ages

______e. Scholarships

______f. Family counseling

______g. Individual counseling

______h. Financial aid

______i. Group therapy

______j. Child care

18. List common problems that can occur in every community.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

19. Complete listing of hospital personnel.

20. Interview a health care team member.

21. Research functions of an organization or agency.

22. Prepare to be a resource person.

23. Analyze collected data on a current national health issue or problem.

(NOTE: If activities 19-23 have not been finished before the test, ask your instructor when they should be completed.)

NURSING TRENDS
UNIT VI

ANSWERS TO TEST

1. a. 3
   b. 7
   c. 1
   d. 8
   e. 6
   f. 9
   g. 2
   h. 5
   i. 4
   j. 10
   k. 14
   l. 13
   m. 11
   n. 12

2. a. 6
   b. 4
   c. 2
   d. 1
   e. 3
   f. 5

3. Description should include:
   a. In 1893, Ballard School, New York, opened the first practical nursing school with a three-month course of instruction
   b. In 1946, the American Nurses' Association recommended that each state consider legislation for the licensure of the practical nurse
   c. In 1957, the National League for Nurses established the Council on Practical Nursing

4. a. 12
   b. 9
   c. 6
   d. 2
   e. 1
   f. 4
   g. 8
   h. 10
   i. 7
   j. 3
   k. 11
   l. 5

5. a. New research and knowledge
   b. Basic change in attitudes toward health
   c. Supply and distribution of health care personnel
   d. Decreased hospitalization and more out-patient care centers

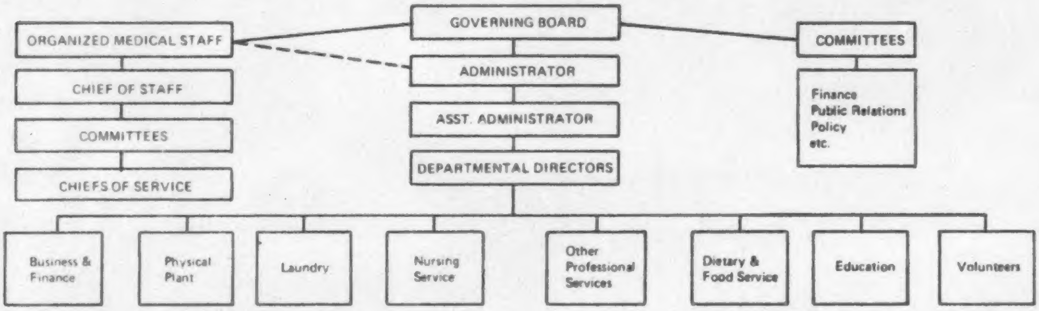
   e. Population trends such as fewer births and increased longevity
   f. Increased interest in preventive health care
   g. Continued emancipation of women
   h. More males in nursing
   i. Growth of junior colleges providing more opportunities for education in health fields

6. Description should include:
   a. Concern for updating and upgrading the quality of nursing care
   b. Shortage of nurses in some populations has influenced the number of programs to produce nurses in a shorter period of time
   c. Legislature has examined the overall health care system and established set standards for practice
   d. Stronger influence from nursing associations
   e. Attempt to provide opportunity for nurses already educated to move into other levels of nursing by a variety of methods and alternatives
   f. Additional education to prepare for areas of specialization

7. a. 1
   b. 4
   c. 2
   d. 5
   e. 3

8. a. General and/or acute care
   b. Specialized
   c. Non-profit
   d. Privately owned and operated for a profit

9.


GOVERNING BOARD
ORGANIZED MEDICAL STAFF
CHIEF OF STAFF
COMMITTEES
CHIEFS OF SERVICE
ADMINISTRATOR
ASST. ADMINISTRATOR
DEPARTMENTAL DIRECTORS
COMMITTEES
Finance
Public Relations
Policy
etc.
Business & Finance
Physical Plant
Laundry
Nursing Service
Other Professional Services
Dietary & Food Service
Education
Volunteers

10. a. 16
    b. 14
    c. 4
    d. 2
    e. 8
    f. 13
    g. 11
    h. 1
    i. 3
    j. 7
    k. 15
    l. 12
    m. 9
    n. 6
    o. 10
    p. 5

11. a. Oldest acceptable form of nursing care; each nursing employee is assigned specific tasks which are carried out on all patients in a unit

    b. Team of employees gives care to patient according to their individual capabilities and personalities under the leadership of a professional nurse

    c. All patient needs are met by one person whether professional or practical

    d. Made up of four or five units designed to give the patient care to meet his or her needs at that time; patient may move through several units in his or her hospital stay

    e. Care is provided in areas dealing with a particular diagnosis by persons educated in those areas

    f. Care is provided on an individual basis, often on a contract agreement

    g. Nursing care is coordinated by the same nurse throughout the patient's hospitalization

    h. Care is provided by health staff that may provide total care on a shift basis or only as a daily or weekly visit to give assistance in specific need areas

    i. Provides total care concerning all needs of the individual including physical and psychological aspects

    j. Step-by-step progressive course of action designed to evaluate patient's needs

    k. Private business that provides temporary health care workers for hospitals, offices, or private homes

12. a. Intensive/critical care

    b. Coronary care

    c. Obstetrical and delivery

- d. Nursery
- e. Psychiatric
- f. Emergency care
- g. Burn centers
- h. Oncology units

13. a, c, d, f

14. Description should include:
    - a. National League for Nursing (NLN)
        - 1) Work with health care agencies, nursing educational institutions, and communities to improve health care services and nursing education programs
        - 2) Assist in accreditation of programs, consultations, testing, continuing education research, and publications
    - b. American Nurses Association (ANA)
        - 1) Speak for all professional nurses
        - 2) Work in special groups and committees on economic welfare programs, legislation, public relations, and the state boards of nursing
    - c. National Association for Practical Nurse Education and Service, Inc. (NAPNES, INC.)
        - 1) Provide services to practical nurse education and the licensed practical nurse
        - 2) Provide courses for practical nurses on various subjects, aid nursing programs in the planning stages, promote recruitment, and carry on practical nursing curriculum research
    - d. National Federation of Licensed Practical Nurses, Inc. (NFLPN, INC.)
        - 1) Speak for all licensed practical and vocational nurses
        - 2) Assist in developing policies and programs of NFLPN through the House of Delegates that have been elected from the state association
        - 3) Support and promote practical nursing through continued efforts to provide upgrading and continuing education programs for better quality care

15. a. V
    b. O
    c. V
    d. V
    e. V
    f. O
    g. O
    h. V
    i. V
    j. V
    k. O
    l. V
    m. V
    n. V
    o. O
    p. V

16. a. Contraception/birth control counseling
    b. Referrals for sterilization
    c. Genetic counseling
    d. Social workers to provide various types of counseling
    e. Fees either free, if funded by some official agency, or based on a sliding scale

17. a, b, d, f, g, i

18. a. Sanitation problems
    b. Drug abuse
    c. Natural disasters
    d. Pollution
    e. Crime

19. Evaluated to the satisfaction of the instructor

20. Evaluated to the satisfaction of the instructor

21. Evaluated to the satisfaction of the instructor

22. Evaluated to the satisfaction of the instructor

23. Evaluated to the satisfaction of the instructor

BASIC NUTRITION AND NUTRIENT EVALUATION
UNIT I

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of basic nutrition in the selection and usage of food, in assisting patients to select healthy diets, and in evaluating a patient's nutritional status. The student should also be able to feed a patient. This knowledge will be evidenced by completion of assignment sheets, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with nutrition to the correct definitions.
2. List classes of nutrients.
3. Select from a list reasons nurses need knowledge of nutrition.
4. Select from a list reasons good nutrition is essential.
5. Describe factors that influence food habits.
6. Match the basic four food groups to daily amounts needed by the average adult.
7. State disadvantages of food misinformation.
8. Describe primary causes of nutritional deficiency.
9. Match terms associated with nutrition evaluation to the correct definitions.
10. State economic considerations in obtaining and caring for food.
11. Match types of milk to their correct descriptions.
12. Complete a chart showing selection, preparation, and storage of food groups.
13. List types of food poisoning.
14. List ways illnesses can be transmitted through foods.
15. Select from a list ways to prevent food contamination and food poisoning.
16. List information to consider when evaluating a patient's diet.
17. Describe preparation of the patient in serving the diet tray.

18. State points to remember when preparing and serving trays.
19. Describe measures used to assist patient at mealtime.
20. Write menus for one week using the basic four food groups as guidelines.
21. Evaluate a food product label.
22. Evaluate a patient's nutritional status.
23. Demonstrate the ability to:
    a. Feed a patient.
    b. Perform a gavage/tube feeding.

BASIC NUTRITION AND NUTRIENT EVALUATION
UNIT I

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

  A. Provide students with objective sheet.

  B. Provide students with information sheet.

  C. Discuss unit and specific objectives.

  D. Discuss information sheet.

  E. Use food models to show the four basic food groups and the selection of a good nutritional diet.

  F. Make a poster of articles written about foods under attack by the Food and Drug Administration.

  Examples: Soft drinks with artificial sweetener, coffee, meats with added red coloring

  G. Have students research various cultural differences concerning foods; then discuss how this would affect the diet in a hospital setting.

  H. Invite a nutritionist or dietician to discuss food habits.

  I. Discuss fad diets and allow class to decide if these would be harmful.

  J. Order pamphlets from General Mills and make a bulletin board from them.

  K. Provide students with assignment sheets.

  L. Provide students with supplementary sources to complete Assignment Sheet #1.

  M. Use food labels students bring to complete Assignment Sheet #2 as a display on a bulletin board.

  N. Roleplay with students using Assignment Sheet #3.

  O. Ask students to bring cereal and milk or other foods to use in Job Sheet #1.

  P. Provide the job sheets and demonstrate the skills.

  Q. Have students blindfold and feed each other, following the job sheet procedure.

R. Give test.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Assignment sheets

1. Assignment Sheet #1--Write Menus for One Week Using the Basic Four Food Groups as Guidelines

2. Assignment Sheet #2--Evaluate a Food Product Label

3. Assignment Sheet #3--Evaluate a Patient's Nutritional Status

D. Job sheets

1. Job Sheet #1--Feed a Patient

2. Job Sheet #2--Perform a Gavage/Tube Feeding

E. Test

F. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study.* Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

B. Fleck, Henrietta. *Introduction to Nutrition.* New York: Macmillan Publishing Company, Inc., 1976.

IV. Food models--Available from Nasco, 901 Janesville Avenue, Fort Atkinson, Wisconsin 53538.

V. Pamphlets--Nutrition-related pamphlets available from General Mills, Inc., Nutrition Department, Department 45, Box 1112, Minneapolis, Minnesota 55440.

VI. Films:

(NOTE: The following films are available on a free-loan basis to Oklahoma teachers *only* from the Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order from the addresses listed.)

A. *Food.* Color, 23 min., American Educational Films, 1973. Available from American Educational Films, 132 Lasky, Box 5001, Beverly Hills, California 90212.

B. *All American Meal.* Color, 11 min., Barr Films, 1974. Available from Barr Films, 3490 East Foothill Boulevard, Pasadena, California 91107.

C. *Label Logic.* Color, 20 min., Aims Films, 1971. Available from Aims Films, 626 Justin Avenue, Glendale, California 91201.

D. *For Tommorrow We Shall Diet.* Color, 24 min., Churchill Films, 1976. Available from Churchill Films, 622 North Robertson Boulevard, Los Angeles, California 90069.

E. *Mission Nutrition.* Color, 15 min., Evol Productions, 1971. Available from Evol Productions, 14406 Brad Drive, Rockford, Maryland 20853.

VII. Filmstrips:

(NOTE: The following filmstrips are available from Trainex Corporation, Box 116, Garden Grove, California 92642.)

A. *Concepts in Nutrition: Cultural Foundations of Diet.*

B. *Concepts in Nutrition: Guidelines in Diet Selection.*

C. *Concepts in Nutrition: Diet and Health.*

D. *Feeding the Patient.*

E. *Serving and Feeding the Patient.*

BASIC NUTRITION AND NUTRIENT EVALUATION
UNIT I

INFORMATION SHEET

I. Terms associated with nutrition

  A. Nutrition--Study of foods and their relation to health

  B. Nutrient--Chemical compound found in food

  C. Food--Substance that the body uses to yield heat and energy, to promote growth, to regulate body processes, and to repair tissues

  D. Malnutrition--Lack of necessary food substances in the body

  E. Dietetics--Science of the use of foods in health and disease

  F. Diet therapy--Modifications in the patient's normal diet to meet requirements created by disease or injury

  G. Nutritional deficiency--Insufficient amount of one or more essential nutrients in the diet

  H. Diet--Food and drink consumed each day

  I. Anorexia--Lack or loss of appetite for food

  J. Achlorhydria--Absence of free hydrochloric acid in the stomach

  K. Gavage--Feeding through a stomach tube using liquid or semi-liquids

II. Classes of nutrients

  A. Carbohydrates

  B. Fats

  C. Proteins

  D. Minerals

  E. Water

  F. Vitamins

  G. Cellulose

III. Reasons nurses need knowledge of nutrition

  A. To be able to select and prepare foods to maintain health

  B. To teach

INFORMATION SHEET

IV. Reasons good nutrition is essential

- A. Promotes a healthier body and mind
- B. Provides greater personal energy and vitality
- C. Increases resistance to diseases
- D. Speeds healing
- E. Produces stronger bones and muscles
- F. Promotes good posture

V. Factors that influence food habits

- A. Personal attitudes
  - 1. Likes and dislikes of foods
  - 2. Method of preparation
  - 3. Childhood training and experiences
  - 4. Food preferences of family and friends

    (NOTE: Dietary habits are difficult to change.)
- B. Region and availability
  - 1. Characteristic foods of certain areas

    Examples: Boston baked beans in the northeastern states; jambalaya in Louisiana
  - 2. Greater variety of foods available due to increasing transportation facilities
- C. Income
  - 1. Proportionally more income is spent by lower income families for food
  - 2. Cost and availability influence food customs
  - 3. Limited income and education adversely affect food habits
  - 4. Buying foods in season is an economic aid in meal planning

INFORMATION SHEET

D. Age

  1. Amount and type of food needed is affected by age

     Example: Young, active persons need high energy foods more than older, less active persons

  2. Balanced diet of protein, carbohydrates, and fats is needed by all ages

E. Religious influence

  1. Diet restrictions of various religions

  2. Restrictive food practices require special planning to assure adequate diet

F. Pregnancy and lactation

  1. Additional nutrients are required

  2. Protein intake is increased to provide amino acids for growth of fetus

  3. Supplementary vitamins and minerals may be prescribed

  4. Increased intake of recommended dairy products

G. Nationality and cultures

  1. Food preparation varies from one culture to another

  2. Food production of a country or geographical area

  3. Availability and facilities for storing food

H. Mobility of population--Ethnic and regional food habits are spread more quickly

I. Increased communication

  1. Advertisements of foods and food preparation

  2. Articles concerning food and diet

  3. Food programs on radio and television

INFORMATION SHEET

VI. Basic four food groups and daily amounts needed by the average adult (Assignment Sheet #1)

(NOTE: The main part of the diet should be selected from the four basic food groups. Other foods may be added to make meals more appealing and satisfying.)

A. Milk--Two servings

(NOTE: Children and pregnant women need three-four servings; teenagers and lactating mothers need four or more servings.)

B. Meat--Two or more servings

C. Bread and cereal--Four or more servings

D. Fruit and vegetable--Four or more servings including one citrus

VII. Disadvantages of food misinformation (Assignment Sheet #2)

A. Faddism appeals to the emotions and thrives where there is lack of knowledge

B. Fake diagnostic machines, youth restorers, health foods, pills to cure diseases, and other products waste billions of dollars annually

C. Guaranteed results by health quacks cause many to postpone obtaining medical help when needed

D. Misinformation may lead to increased expenditure of money for a nutritionally poor diet

E. Bizarre weight reduction plans may seriously alter body metabolism

F. Overuse of vitamins and/or minerals may alter metabolism

G. Continued use of soda or other alkaline medication may harmfully diminish the effectiveness of the gastrointestinal system

VIII. Primary causes of nutritional deficiency

A. Inadequate intake due to

1. Poor food habits
2. Consumption of nutrient-deficient food
3. Anorexia due to disease
4. Diarrhea

INFORMATION SHEET

5. Alcoholism

   (NOTE: It may depress appetite.)

6. Inappropriate therapeutic diet

7. Lack of proper food

B. Inadequate use of ingested food due to

1. Faulty absorption in intestinal tract

   Examples: Poor iron absorption due to achlorhydria; poor absorption of fat-soluble vitamins due to excessive use of mineral oil

2. Reduced vitamin synthesis in the intestinal tract following oral antibiotic therapy

3. Metabolic disturbances

   Example: Decreased insulin production

4. Diseases of digestive tract

5. Food allergies

IX. Terms associated with nutrition evaluation

A. Condiment--Seasoning; ingredient added to enhance food flavor

B. Adulterate--To add an unnecessary ingredient to cheapen or falsify a preparation

C. Mislabeled--Incorrect or incomplete information on label

D. Additive--Element added to a natural food usually to improve or preserve

E. Dehydrated--Pertaining to food with water removed

F. Enriched--Food improved in nutritive value by adding vitamins and minerals during processing

G. Restored--Food in which nutrients lost in processing are replaced

H. Fortified--Added nutrients above the level of the food in its natural state

X. Economic considerations in obtaining and caring for food

A. Buy foods which are in season and in good supply

INFORMATION SHEET

B. Plan menus in advance

C. Buy staples and canned goods when they are on sale

D. Buy in quantity when possible, if adequate storage is available

(NOTE: Larger quantities may cost less per unit than small quantities.)

E. Recognize bargains

(NOTE: Foods reduced in price are a bargain only if they are useable in one's situation.)

F. Know grades and brands of food

(NOTE: Less-advertised products often are as good a quality as well-known brands.)

G. Compare labels for weights and ingredients

H. Buy less expensive forms of food

(NOTE: Margarine is cheaper than butter. Pork or beef liver is less expensive than calves' liver and is as nutritious. Less expensive cuts of beef can be tastefully prepared.)

I. Avoid impulse buying

J. Compare nutritive value of snack foods; limit buying of empty calorie foods

K. Store foods properly to avoid spoilage and loss of nutrients

L. Use perishable foods as soon as possible

M. Use leftover foods

N. Buy day-old bakery goods at reduced prices

XI. Types of milk

A. Skim--Fat including vitamin A removed but contains all other nutrients found in whole milk; may have vitamins A and D added

B. Homogenized-Fat particles evenly dispersed so cream does not rise

C. Pasteurized--Heated to specific temperatures to destroy pathogenic bacteria but not affect nutrients

(NOTE: Pasteurization does not sterilize milk.)

INFORMATION SHEET

D. Evaporated--Sixty percent of water removed by heating above boiling temperature

(NOTE: High temperature used for evaporation caramelizes the lactose, giving the typical flavor.)

E. Condensed--Water removed and sugar added so carbohydrate content is about 40 percent; compared to whole milk it is high in sugar and low in calcium and milk vitamins

F. Low fat--Only two percent fat; comparable to whole milk in nutrient value but lower in calories

G. Cultured--Prepared with special bacterial cultures to produce desired acidity, body, flavor, and aroma

(NOTE: This type of milk includes cultured buttermilk, yogurt, and acidophilous milk.)

H. Filled--Combination of milk solids and fats or oils rather than milk fat

I. Imitation--Resembles milk but contains no milk products

J. Powdered or dry--Whole, low fat, or nonfat milk with water removed

(NOTE: Nonfat dry milk is the least expensive form of milk on the market. When reconstituted, it has the same food value as the milk from which it was made.)

INFORMATION SHEET

XII. Selection, preparation, and storage of food groups

FOOD	SELECTION	STORAGE	PREPARATION
Milk, fresh	More palatable	Refrigerate in covered containers; freezing does not alter nutrients	Cook over low heat; avoid boiling or scorching
Powdered	Easy to store; keeps longer; is less expensive	Dry--Store in cool, dry place Reconstituted--Refrigerate	Add dry when preparing foods to increase nutrients; use same as fresh milk
Evaporated	Easy to store; sanitary; keeps well	Refrigerate after opening	Use as directed, may substitute for fresh milk
Cheese	Wide variety; good source of protein, calcium, and phosphorus; meat substitute	Refrigerate well-wrapped or in covered container, storage life--five-seven days for soft cheeses, longer for hard cheeses; freezing alters texture of some cheeses	Cook at low temperature for short time; more flavorful if served at room temperature
Eggs	Purchase only refrigerated eggs; label shows grade--Use grade A when appearance is important; grade B may be used for baking and cooking; cracked shells allow bacteria to enter eggs	Refrigerate in covered containers; for best flavor use within one week; washing before storing removes protective coating	Yolks and whites separate more easily at room temperature; cook at low temperatures to prevent discoloration, curdling, or toughness; overcooking toughens, shrinks protein
Cereals and Breads	Whole grain products have more nutrients than refined products; sugared cereals are less economical	Store in cool, dry place; bread retains freshness best at room temperature but molds faster; bread freezes well	Use cereals according to package directions; overcooking cereals reduces vitamin content

INFORMATION SHEET

FOOD	SELECTION	STORAGE	PREPARATION
Meat, Fish, and Poultry	Less expensive cuts are as nutritious as the more expensive; method of preparation, cost, and use determine selection	Store fresh meat in refrigerator in loosely covered container; store cooked meat in tightly covered containers; may be frozen for longer storage	Less expensive cuts require longer cooking at lower temperatures; frozen meats may be cooked without thawing; wash poultry before cooking; cook fish at medium temperature; do not overcook
Fruits and Vegetables	Buy in season for lowest prices; avoid bruising; grade of canned fruits and vegetables does not indicate nutritive value	Fruits and tomatoes ripen better at room temperature; ripe fruits except bananas and vegetables should be refrigerated; store frozen packages at 0° F (0° C); storage life varies; fresh produce should be used as soon as possible	Cook only until tender using as little water as possible; preserve color of peeled fruits by putting them in weak salt or acid solution; cooking liquids contain dissolved nutrients and should be used; avoid overcooking; home-canned vegetables should be boiled for 20 minutes

INFORMATION SHEET

XIII. Types of food poisoning

- A. Chemical poisons in foods

  Examples: Poisonous mushrooms; rhubarb leaves; green part of white potatoes

- B. Chemicals added to foods

  Example: Insecticides used to spray growing fruits, vegetables, or homes

- C. Disease-producing organisms in foods

  Examples: Products from diseased animals; foods contaminated by food handlers; foods improperly cooked or stored

XIV. Ways illnesses can be transmitted through foods

- A. By animals

  Examples: Tularemia from wild rabbits; worm infestations from various meat from cattle and pork; salmonella from pork, poultry, and eggs; tuberculosis from infected cattle

- B. By food handlers and shoppers

  Examples: Common colds; influenza; staphylococcal infections; infectious hepatitis

- C. Through improper preparation or storage of food

  Examples: Staphylococcal illnesses from precooked ham, milk, custards, cream fillings, and salads which have not been refrigerated properly; botulism from improperly canned foods

XV. Ways to prevent food contamination and food poisoning

- A. Proper cooking of foods
- B. Efficient and prompt refrigeration
- C. Cleanliness in preparing foods
- D. Maintaining frozen foods at ideal temperature
- E. Proper dishwashing and handwashing
- F. Proper handling of prepared foods
- G. Proper handling of dishes and utensils

INFORMATION SHEET

XVI. Information to consider when evaluating a patient's diet (Assignment Sheet #3)

- A. Height and weight
- B. Illness or diagnosis
- C. Age

XVII. Preparation of the patient in serving the diet tray

- A. Before meal care
  - 1. Provide for elimination
    - a. Offer the bedpan or urinal or assist to the bathroom before mealtime
    - b. Remember that interrupting the meal for elimination may be distressful to the patient
    - c. If patient is uncomfortable from not having eliminated prior to mealtime, appetite may be decreased
  - 2. Give mouth and hand care
    - a. Assist patient in brushing teeth or cleaning dentures and in using mouthwash if desired

      (NOTE: Many sick people have a bad taste in their mouth; if mouth care is not given, food may taste bad.)
    - b. Help prevent spread of infection through hand cleanliness
  - 3. Position patient
    - a. Assist patient to sit up in a chair, if possible
    - b. Elevate patient to a sitting position if permissible, if patient needs to remain in bed
    - c. Position overbed table for the convenience of the patient
    - d. Prepare a place for the tray to be set on the patient's bedside table, if the patient must remain recumbent
  - 4. Prepare the environment
    - a. Create an attractive environment by putting away utensils such as emesis basin, bedpan, or urinal
    - b. Place a fresh glass of water within the patient's reach

INFORMATION SHEET

B. After meal care

 1. Assist with mouth care
 2. Straighten bed and remove crumbs
 3. Place patient in a comforable position or help him or her return to bed if patient has been up; adjust communication device
 4. Place food covers back on tray and return tray to proper place
 5. Note and record amount and kinds of food eaten

XVIII. Points to remember when preparing and serving trays

A. Check name and room number so each patient receives the correct tray

B. Serve one tray at a time to avoid dropping tray or spilling liquids

C. Serve trays promptly so foods are at the desirable serving temperature

D. Check each tray to see that it is complete

(NOTE: Besides food in covered containers each tray should have a napkin, eating utensils, and, if allowed, sugar, salt, and pepper.)

E. See that each patient who should have a tray receives one

F. Serve patients who need to be fed after the other patients to allow health personnel to feed them with a minimum of interruptions

XIX. Measures used to assist patient at mealtime (Job Sheets #1 and #2)

(NOTE: Schedule unpleasant treatments or other procedures after meals, if possible.)

A. Place tray on table with main dish closest to patient

B. Remove food covers and put them to one side

C. Help patient as needed with cutting food, buttering bread, and pouring beverage; place food and communication device so they are easily reached

(NOTE: Allow patient to do as much as possible; feed only if necessary.)

D. Allow patient ample time to eat; stress importance of therapeutic diet, if necessary; if patient does not eat, try to determine the reason

E. Avoid unnecessary interruptions during mealtime, such as giving treatments or medications

INFORMATION SHEET

F. Make sure complaints about the food or food service receive prompt attention; if necessary, make arrangements for patient to discuss the matter with the dietician

BASIC NUTRITION AND NUTRIENT EVALUATION
UNIT I

ASSIGNMENT SHEET #1--WRITE MENUS FOR ONE WEEK USING THE BASIC FOUR FOOD GROUPS AS GUIDELINES

NAME ______________________________ SCORE ____________________

It is important to be able to plan menus using the four basic food groups. Not only should you think about the content of the diet, but about foods that are attractive and have a pleasant aroma.

Write menus for one week using the basic four food groups as guidelines. Consider first the nutrients provided, then plan for color, texture, and taste. Complete the menu plan on the following pages and hand in to your instructor for evaluation.

ASSIGNMENT SHEET #1

DAY 1

BREAKFAST

SNACK

LUNCH

SNACK

DINNER

SNACK

ASSIGNMENT SHEET #1

DAY 2

BREAKFAST
SNACK
LUNCH
SNACK
DINNER
SNACK

ASSIGNMENT SHEET #1

DAY 3

BREAKFAST
SNACK
LUNCH
SNACK
DINNER
SNACK

26-B

ASSIGNMENT SHEET #1

DAY 4

BREAKFAST
SNACK
LUNCH
SNACK
DINNER
SNACK

ASSIGNMENT SHEET #1

DAY 5

BREAKFAST

SNACK

LUNCH

SNACK

DINNER

SNACK

28-B

ASSIGNMENT SHEET #1

DAY 6

BREAKFAST
SNACK
LUNCH
SNACK
DINNER
SNACK

ASSIGNMENT SHEET #1

DAY 7

BREAKFAST
SNACK
LUNCH
SNACK
DINNER
SNACK

BASIC NUTRITION AND NUTRIENT EVALUATION
UNIT I

ASSIGNMENT SHEET #2--EVALUATE A FOOD PRODUCT LABEL

NAME ______________________________ SCORE ________________

There is a great deal of research and discussion going on about food products, their additives, and the relationship between those and diseases. Do you really know what you are eating? Do you read labels before you purchase foods or prepare them?

Take a food product from your cabinet and remove the label. Fasten the label on this sheet and answer the questions on the following page. Discuss your findings in class or hand your answers to instructor for evaluation.

Example: Jar of beef bouillon cubes

Contents: Salt, hydrolyzed vegetable protein, malto-dextrin sugar, beef fat, water, monosodium glutamate, flavorings, corn sugar, beef extract, caramel color, hydrogenated vegetable fat, U.S. certified food color

YOUR LABEL

ASSIGNMENT SHEET #2

1. List the main ingredients of your product below. If they have nutrient percentages, list those beside each ingredient.

____

____

____

____

____

____

2. Define those ingredients that are not familiar to you.

____

____

____

____

____

3. Are any of these additives involved in the research controversy? ____________ If so which ones?

____

____

____

____

____

4. Do you feel this is a nutritional food? ____________ Why? ____________

____

____

BASIC NUTRITION AND NUTRIENT EVALUATION
UNIT I

ASSIGNMENT SHEET #3--EVALUATE A PATIENT'S NUTRITIONAL STATUS

NAME ______________________ SCORE ______________

Because a nutritious diet is so important to keep the body in good condition, it is even more important when the body functions are altered. Good nutrition helps to maintain functions, to repair tissues, and to provide energy for daily living. The diet is an essential part of therapy for hospitalized patients. It may be up to you to interview the patient to evaluate his or her daily diet. There are specific questions to ask the patient to help you understand why they consume the foods they do and to assist them in making good choices in selecting foods. Select a patient to interview and fill out this sheet. Hand in to your instructor for evaluation or discuss in class.

Information from the chart

Patient's name or initials: ______________________ Date: __________

Diagnosis: ____________________________ Age: __________

Weight: ______________ Height: ________________

Religious/cultural background: ______________________________

Information from the patient

1. What kinds of food do you like best? ______________________________
____
2. What type of food habits do you follow? ______________________________
____

Examples: Three regular meals with snacks, skips breakfast, light lunch and heavy dinner, constant snacker

3. Do you feel that you are underweight or overweight? ____________________
____
4. Are you on any special diet? __________ If so, what type? ______________
____
5. Are you satisfied with this diet? __________ What do you like most about it?
____

Least? ____

ASSIGNMENT SHEET #3

6. What foods do you dislike? ____________________

____

7. Are you on medication at this time? __________ If so, what type? __________

____

Does it affect your diet? ____________________

If so, how? ____________________

8. Do you have any food allergies? __________ If so, what type? __________

____

9. Are you satisfied with the diet here in the hospital? ____________________

____

____

10. Would it be beneficial for you to speak with the dietician? ____________________

____

____

____

BASIC NUTRITION AND NUTRIENT EVALUATION
UNIT I

JOB SHEET #1--FEED A PATIENT

(NOTE: Think how frustrating it would be not to be able to feed yourself. It would be even more frustrating to have someone feed you who had not mastered the skills involved. It may seem like a simple process, but to feed someone else takes patience and skills. Practice with a classmate in feeding each other and put yourself in the patient's place.)

I. Equipment

A. Patient's tray

B. Overbed table or suitable sturdy table

II. Procedure:

A. Offer to assist patient to bathroom or to use bedpan or urinal

B. Assist patient in washing and drying hands

C. Place patient in comfortable position so that patient can see the food if possible

D. Wash hands

E. Remove clutter on top of table and surrounding areas

F. Discard any articles that may be unpleasant

G. Wash hands

H. Check the tray and the identity of the patient before serving

(NOTE: Tray will have a card or identification slip attached that tells you the patient's name, room number, and the type of diet. Be sure that you have the right tray. Check for signs that patient may be scheduled for surgery or tests that would not permit food intake.)

I. Set tray in front of patient and uncover contents, lifting side of cover away from the patient first to prevent steam or aroma from being directed to the patient

(NOTE: Many times a patient who is ill may be overcome by an immediate, strong aroma from the tray.)

JOB SHEET #1

J. Arrange everything on the tray for easy access and decide if patient is able to feed any portion of the meal to himself or herself

(NOTE: Some patients who cannot handle a fork or spoon may be able to hold their own drinking glass. Blind patients may sometimes help themselves if the food is set up as a clock would be, with instructions from the nurse on how things are arranged on the plate, such as meat at 8:00, potatoes at 3:00, and green beans at 12:00.)

K. Provide a napkin or a towel to protect patient and clothing

L. Sit down in a comfortable position if you are to feed the patient

(NOTE: The patient will be more relaxed and feel less hurried if the nurse is sitting to feed him.)

M. Describe the food to the patient if he or she is unable to see

N. Fill fork or spoon only half full; avoid spilling

O. Feed slowly, alternating foods and liquids

P. Allow time between bites; stop occasionally so the patient can rest

Q. Give liquids through a straw

(NOTE: When giving hot liquids, the patient should be warned to take only small sips until liquid cools to avoid being burned.)

R. Allow patient to hold bread or to hold the straw if possible

S. Encourage the patient to take as much of the diet as possible

T. Clean the table after the patient has finished

U. Assist patient in cleansing hands and to brush teeth if desired

V. Make patient comfortable

W. Record amounts of food taken

JOB SHEET #1

III. Checklist for feeding a patient

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ____________________		
B.	Offered to assist patient to bathroom or to use bedpan or urinal	☐	☐
	Comments: ____________________		
C.	Assisted patient in washing and drying hands	☐	☐
	Comments: ____________________		
D.	Placed patient in comfortable position so that patient could see the food if possible	☐	☐
	Comments: ____________________		
E.	Washed hands properly	☐	☐
	Comments: ____________________		

JOB SHEET #1

		Performed well	Needs improvement
F.	Removed clutter on top of table and surrounding areas	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
G.	Discarded any articles that might be unpleasant	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
H.	Washed hands properly	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
I.	Checked the tray and the identity of the patient before serving	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
J.	Set tray in front of patient and uncovered contents; lifted side of cover away from the patient first to prevent steam or aroma from being directed to the patient	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		

JOB SHEET #1

	Performed well	Needs improvement
K. Arranged everything on the tray for easy access and decided if patient was able to feed any portion of the meal to himself or herself	☐	☐
Comments: ______________________________		
L. Provided a napkin or towel to protect patient and clothing	☐	☐
Comments: ______________________________		
M. Sat down in a comfortable position while feeding the patient	☐	☐
Comments: ______________________________		
N. Described the food to the patient if he or she was unable to see	☐	☐
Comments: ______________________________		
O. Filled fork or spoon only half full to avoid spilling	☐	☐
Comments: ______________________________		

JOB SHEET #1

		Performed well	Needs improvement
P.	Fed slowly; alternated foods and liquids	☐	☐
	Comments:		
Q.	Allowed time between bites; stopped occasionally so the patient could rest	☐	☐
	Comments:		
R.	Gave liquids through a straw	☐	☐
	Comments:		
S.	Allowed patient to hold bread or to hold the straw if possible	☐	☐
	Comments:		
T.	Encouraged the patient to take as much of the diet as possible	☐	☐
	Comments:		
U.	Cleaned the table after the patient finished	☐	☐
	Comments:		

JOB SHEET #1

		Performed well	Needs improvement
V.	Assisted patient in cleansing hands and in brushing teeth if desired	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
W.	Made the patient comfortable	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
X.	Recorded amounts of food taken	☐	☐

Comments: ____________________

____

____

BASIC NUTRITION AND NUTRIENT EVALUATION
UNIT I

JOB SHEET #2--PERFORM A GAVAGE/TUBE FEEDING

(NOTE: When a patient is unable to take oral feedings, a naso-gastric may be inserted into the stomach to provide nutrients by tube.)

I. Equipment

A. Disposable bed pad or protector

B. Irrigation set

(NOTE: Pre-packaged sets include a syringe, plastic pad, basin, and holder.)

C. Formula

(NOTE: The physician prescribes the caloric value, the volume, and the frequency of fluid to be given in 24 hours.)

D. Water

E. Stethoscope

II. Procedure

A. Check physician's order for the amount, frequency, and type of formula

B. Wash hands

C. Measure formula and warm to room temperature

(**CAUTION:** Never give the formula cold.)

D. Collect equipment and take to bedside

E. Identify patient and provide privacy

F. Explain procedure to patient if this is the first time for feeding

G. Place equipment conveniently for use

H. Place bed protector under area where tube will be opened

I. Pour water to be used into proper container

(NOTE: Amount to be used will depend on physician's order or hospital policy.)

J. Elevate patient to a semi-sitting or sitting position if possible

JOB SHEET #2

K. Unfasten tube from patient gown

(NOTE: The type of fastener will depend on the type of tube and the hospital policy. Usually a safety pin can be used to fasten the tube to the gown.)

L. Loosen the clamp while continuously pinching the tube near the neck of the syringe

M. Check for the tube placement

1. The most accurate method of checking tube placement is aspiration of stomach contents through a syringe

2. Another method calls for the insertion of a measured amount of air through a syringe while simultaneously using the stethoscope with the diaphragm placed over the stomach. When the air goes into the stomach, the sound heard is much like two pieces of hard rubber being rubbed together. Aspirate the measured amount of air

N. Remove plunger from the syringe

(NOTE: Make sure you have tubing pinched off as you remove the plunger from the syringe, leaving the empty syringe connected to tubing.)

O. Use the non-dominant hand-to-hold tube and pinch off the tubing toward the syringe as you attach the syringe to the tube

P. Hold syringe 12" above patient's head

Q. Pour one-half of the room temperature water from the container into the syringe slowly, releasing pressure on the pinched area

R. Watch the water level carefully and note when the fluid level becomes low in the neck of the syringe

S. Pour in the formula

T. Add additional formula until all feeding is given, then add the remainder of the water to clear the tubing

U. Pinch off tubing as water level becomes low in the neck of the syringe, then put the clamp back on the tubing

V. Secure the tubing to the patient's gown and remove the bed protector

W. Place patient in semi-Fowler's position and make comfortable

X. Remove syringe from tubing and rinse; replace in container

Y. Clean equipment according to hospital policy and place in appropriate area

JOB SHEET #2

Z. Wash hands and record the time, procedure, type of formula, number of cubic centimeters of formula and water, patient reaction, your name, and title

JOB SHEET #2

III. Checklist for performing a gavage/tube feeding

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ________________________________		
B.	Checked physician's order for the amount, frequency, and type of formula	☐	☐
	Comments: ________________________________		
C.	Washed hands properly	☐	☐
	Comments: ________________________________		
D.	Measured formula and warmed to room temperature	☐	☐
	Comments: ________________________________		
E.	Collected equipment and took to bedside	☐	☐
	Comments: ________________________________		

JOB SHEET #2

		Performed well	Needs improvement
F.	Identified patient and provided privacy	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
G.	Explained procedure to patient if that was the first time for feeding	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
H.	Placed equipment conveniently for use	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
I.	Placed bed protector under area where tube was opened	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
J.	Poured water to be used into proper container	☐	☐

Comments: ____________________

____

____

JOB SHEET #2

		Performed well	Needs improvement
K.	Elevated patient to a semi-sitting or sitting position if possible	☐	☐

Comments: ____

____

____

L.	Unfastened tube from patient gown	☐	☐

Comments: ____

____

____

M.	Loosened the clamp while continuously pinching the tube near the neck of the syringe	☐	☐

Comments: ____

____

____

N.	Checked the tube placement	☐	☐

Comments: ____

____

____

O.	Removed plunger from the syringe	☐	☐

Comments: ____

____

____

JOB SHEET #2

		Performed well	Needs improvement
P.	Used the non-dominant hand-to-hold tube and pinched off the tubing toward the syringe while attaching the syringe to the tube	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		
Q.	Held syringe 12" above patient's head	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		
R.	Poured one-half of the room temperature water from the container into the syringe slowly, releasing pressure on the pinched area	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		
S.	Watched the water level carefully and noted when the fluid level became low in the neck of the syringe	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		
T.	Poured in the formula	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		

JOB SHEET #2

		Performed well	Needs improvement
U.	Added additional formula until all feeding was given, then added the remainder of the water to clear the tubing	☐	☐
	Comments: ____________________ ____________________ ____________________		
V.	Pinched off tubing as water level became low in the neck of the syringe, then put the clamp back on the tubing	☐	☐
	Comments: ____________________ ____________________ ____________________		
W.	Secured the tubing to the patient's gown and removed the bed protector	☐	☐
	Comments: ____________________ ____________________ ____________________		
X.	Placed patient in semi-Fowler's position and made comfortable	☐	☐
	Comments: ____________________ ____________________ ____________________		
Y.	Removed syringe from tubing and rinsed; replaced in container	☐	☐
	Comments: ____________________ ____________________ ____________________		

JOB SHEET #2

	Performed well	Needs improvement
Z. Cleaned equipment according to hospital policy and placed in appropriate area	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
AA. Washed hands and recorded the time, procedure, type of formula, number of cubic centimeters of formula and water, patient reaction, your name, and title	☐	☐

Comments: ____________________

____

____

BASIC NUTRITION AND NUTRIENT EVALUATION
UNIT I

TEST

NAME ______________________________ SCORE ______________

1. Match terms associated with nutrition to the correct definitions. Write the correct numbers in the blanks.

_____a. Science of the use of foods in health and disease

_____b. Lack or loss of appetite for food

_____c. Chemical compound found in food

_____d. Modifications in the patient's normal diet to meet requirements created by disease or injury

_____e. Study of foods and their relation to health

_____f. Absence of free hydrochloric acid in the stomach

_____g. Substance that the body uses to yield heat and energy, to promote growth, to regulate body processes, and to repair tissues

_____h. Insufficient amount of one or more essential nutrients in the diet

_____i. Lack of necessary food substances in the body

_____j. Food and drink consumed each day

_____k. Feeding through a stomach tube using liquid or semi-liquids

1. Nutrition
2. Nutrient
3. Food
4. Malnutrition
5. Dietetics
6. Diet therapy
7. Nutritional deficiency
8. Diet
9. Anorexia
10. Achlorhydria
11. Gavage

2. List classes of nutrients.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ____

g. ____

3. Select from the following list reasons nurses need knowledge of nutrition. Mark an "X" in the correct blanks.

_____a. To be able to select and prepare foods to maintain health

_____b. To teach

_____c. To help advertise certain food products

_____d. To help lower food prices

_____e. To promote professionalism

_____f. To make nurses more observant

4. Select from the following list reasons good nutrition is essential. Mark an "X" in the correct blanks.

_____a. Prevents alopecia

_____b. Increases resistance to diseases

_____c. Promotes a healthier body and mind

_____d. Promotes good posture

_____e. Prevents presbyopia

_____f. Provides greater personal energy and vitality

_____g. Increases diaphoresis

_____h. Guarantees good health

_____i. Produces stronger bones and muscles

_____j. Speeds healing

5. Describe factors that influence food habits.

a. Personal attitudes-- ____

____

____

____

____

b. Region and availability--

c. Income--

d. Age--

e. Religious influence--

f. Pregnancy and lactation--

g. Nationality and cultures--

h. Mobility of population--

i. Increased communication--

6. Match the basic four food groups to daily amounts needed by the average adult. Write the correct numbers in the blanks.

______a. Four or more servings

______b. Four or more servings including one citrus

______c. Two servings

______d. Two or more servings

1. Milk
2. Meat
3. Bread and cereal
4. Fruit and vegetable

7. State disadvantages of food misinformation.

a. ______________________________

____

b. ______________________________

____

c. ______________________________

____

d. ______________________________

____

e. ______________________________

____

f. ______________________________

____

g. ______________________________

____

8. Describe primary causes of nutritional deficiency.

a. Inadequate intake due to-- ______________________________

____

____

____

____

____

____

b. Inadequate use of ingested food due to-- ____________________

9. Match terms associated with nutrition evaluation to the correct definitions. Write the correct numbers in the blanks.

_____a. Incorrect or incomplete information on label

_____b. Added nutrients above the level of the food in its natural state

_____c. Pertaining to food with water removed

_____d. Food in which nutrients lost in processing are replaced

_____e. Seasoning; ingredient added to enhance food flavor

_____f. Food improved in nutritive value by adding vitamins and minerals during processing

_____g. To add an unnecessary ingredient to cheapen or falsify a preparation

_____h. Element added to a natural food usually to improve or preserve

1. Condiment
2. Adulterate
3. Mislabeled
4. Additive
5. Dehydrated
6. Enriched
7. Restored
8. Fortified

10. State economic considerations in obtaining and caring for food.

a. ____________________

b. ____________________

c. ____________________

d. ____________________

e. ____________________

f. ____________________

g. ____________________

h. ____________________

i. ______________________________

j. ______________________________

k. ______________________________

l. ______________________________

m. ______________________________

n. ______________________________

11. Match types of milk to their correct descriptions. Write the correct numbers in the blanks.

_____a. Water removed and sugar added so carbohydrate content is about 40 percent; compared to whole milk it is high in sugar and low in calcium and milk vitamins

_____b. Heated to specific temperatures to destroy pathogenic bacteria but not affect nutrients

_____c. Prepared with special bacterial cultures to produce desired acidity, body, flavor, and aroma

_____d. Fat including vitamin A removed but contains all other nutrients found in whole milk; may have vitamins A and D added

_____e. Sixty percent of water removed by heating above boiling temperature

_____f. Only two percent fat; comparable to whole milk in nutrient value but lower in calories

_____g. Fat particles evenly dispersed so cream does not rise

_____h. Whole, low fat, or nonfat milk with water removed

_____i. Combination of milk solids and fats or oils rather than milk fat

_____j. Resembles milk but contains no milk products

1. Skim
2. Homogenized
3. Pasteurized
4. Evaporated
5. Condensed
6. Low fat
7. Cultured
8. Filled
9. Imitation
10. Powdered or dry

12. Complete the following chart on selection, preparation, and storage of food groups. Write the correct answers in the blanks.

FOOD	SELECTION	STORAGE	PREPARATION
Milk, fresh	a.____________	Refrigerate in covered containers; freezing does not alter nutrients	Cook over low heat; avoid boiling or scorching
b.______	Easy to store; keeps longer; is less expensive	Dry--Store in cool, dry place Reconstituted--Refrigerate	c.____________
Evaporated	Easy to store; sanitary; keeps well	d.____________	Use as directed; may substitute for fresh milk
Cheese	Wide variety; good source of protein, calcium, and phosphorus; meat substitute	Refrigerate well-wrapped or in covered container, storage life--five-seven days for soft cheeses, longer for hard cheeses; freezing alters texture of some cheeses	e.____________
f.______	Purchase only refrigerated eggs; label shows grade--Use grade A when appearance is important; grade B may be used for baking and cooking; cracked shells allow bacteria to enter eggs	Refrigerate in covered containers; for best flavor use within one week; washing before storing removes protective coating	Yolks and whites separate more easily at room temperature; cook at low temperatures to prevent discoloration, curdling, or toughness; overcooking toughens, shrinks protein
Cereals and Breads	g.____________	Store in cool, dry place; bread retains freshness best at room temperature but molds faster; bread freezes well	Use cereals according to package directions; overcooking cereals reduces vitamin content

FOOD	SELECTION	STORAGE	PREPARATION
Meat, Fish, and Poultry	Less expensive cuts are as nutritious as the more expensive; method of preparation, cost, and use determine selection	h.________	Less expensive cuts require longer cooking at lower temperatures, frozen meats may be cooked without thawing; wash poultry before cooking; cook fish at medium temperature; do not overcook
i.________	Buy in season for lowest prices; avoid bruising; grade of canned fruits and vegetables does not indicate nutritive value	Fruits and tomatoes ripen better at room temperature; ripe fruits except bananas and vegetables should be refrigerated; store frozen packages at 0° F (0° C); storage life varies; fresh produce should be used as soon as possible	j.________

13. List types of food poisoning.

a. ______________________________

b. ______________________________

c. ______________________________

14. List ways illnesses can be transmitted through foods.

a. ______________________________

b. ______________________________

c. ______________________________

15. Select from the following list ways to prevent food contamination and food poisoning. Mark an "X" in the correct blanks.

_____a. Storing food in open containers

_____b. Cleanliness in preparing foods

_____c. Thawing frozen foods well before cooking time at room temperature

_____d. Proper cooking of foods

_____e. Proper handling of dishes and utensils

_____f. Proper dishwashing and handwashing

_____g. Storing all foods at room temperature

_____h. Efficient and prompt refrigeration

_____i. Proper handling of prepared foods

_____j. Maintaining frozen foods at ideal temperature

_____k. Refrigerating liquids only

_____l. Eating all meats medium rare or rare to get the full nutritional value

16. List information to consider when evaluating a patient's diet.

a. ______________________________

b. ______________________________

c. ______________________________

17. Describe preparation of the patient in serving the diet tray.

a. Before meal care

1) Provide for elimination-- ______

2) Give mouth and hand care-- ______

3) Position patient-- ______

4) Prepare the environment-- ______

b. After meal care-- ______

18. State points to remember when preparing and serving trays.

    a. ____________________

    b. ____________________

    c. ____________________

    d. ____________________

    e. ____________________

    f. ____________________

    ____

19. Describe measures used to assist patient at mealtime.

    ____

    ____

    ____

    ____

    ____

    ____

    ____

    ____

    ____

    ____

    ____

    ____

20. Write menus for one week using the basic four food groups as guidelines.

21. Evaluate a food product label.

22. Evaluate a patient's nutritional status.

23. Demonstrate the ability to:

    a. Feed a patient.

    b. Perform a gavage/tube feeding.

    (NOTE: If activities 20-23 have not been finished before the test, ask your instructor when they should be completed.)

BASIC NUTRITION AND NUTRIENT EVALUATION
UNIT I

ANSWERS TO TEST

1. a. 5 g. 3
   b. 9 h. 7
   c. 2 i. 4
   d. 6 j. 8
   e. 1 k. 11
   f. 10

2. a. Carbohydrates
   b. Fats
   c. Proteins
   d. Minerals
   e. Water
   f. Vitamins
   g. Cellulose

3. a, b

4. b, c, d, f, i, j

5. Description should include:
   a. Personal attitudes
      1) Likes and dislikes of foods
      2) Method of preparation
      3) Childhood training and experiences
      4) Food preferences of family and friends
   b. Region and availability
      1) Characteristic foods of certain areas
      2) Greater variety of foods available due to increasing transportation facilities

c. Income

  1) Proportionally more income is spent by lower income families for food

  2) Cost and availability influence food customs

  3) Limited income and education adversely affect food habits

  4) Buying foods in season is an economic aid in meal planning

d. Age

  1) Amount and type of food needed is affected by age

  2) Balanced diet of protein, carbohydrates, and fats is needed by all ages

e. Religious influence

  1) Diet restrictions of various religions

  2) Restrictive food practices require special planning to assure adequate diet

f. Pregnancy and lactation

  1) Additional nutrients are required

  2) Protein intake is increased to provide amino acids for growth of fetus

  3) Supplementary vitamins and minerals may be prescribed

  4) Increased intake of recommended dairy products

g. Nationality and cultures

  1) Food preparation varies from one culture to another

  2) Food production of a country or geographical area

  3) Availability and facilities for storing food

h. Mobility of population--Ethnic and regional food habits are spread more quickly

i. ,Increased communication

  1) Advertisements of foods and food preparation

  2) Articles concerning food and diet

  3) Food programs on radio and television

6. a. 3 c. 1

   b. 4 d. 2

7. a. Faddism appeals to the emotions and thrives where there is lack of knowledge

   b. Fake diagnostic machines, youth restorers, health foods, pills to cure diseases, and other products waste billions of dollars annually

   c. Guaranteed results by health quacks cause many to postpone obtaining medical help when needed

   d. Misinformation may lead to increased expenditure of money for a nutritionally poor diet

   e. Bizarre weight reduction plans may seriously alter body metabolism

   f. Overuse of vitamins and/or minerals may alter metabolism

   g. Continued use of soda or other alkaline medication may harmfully diminish the effectiveness of the gastrointestinal system

8. Description should include:

   a. Inadequate intake due to

      1) Poor food habits

      2) Consumption of nutrient-deficient food

      3) Anorexia due to disease

      4) Diarrhea

      5) Alcoholism

      6) Inappropriate therapeutic diet

      7) Lack of proper food

   b. Inadequate use of ingested food due to

      1) Faulty absorption in intestinal tract

      2) Reduced vitamin synthesis in the intestinal tract following oral antibiotic therapy

      3) Metabolic disturbances

      4) Diseases of digestive tract

      5) Food allergies

9. a. 3

   b. 8

   c. 5

   d. 7

   e. 1

   f. 6

   g. 2

   h. 4

10. a. Buy foods which are in season and in good supply
    b. Plan menus in advance
    c. Buy staples and canned goods when they are on sale
    d. Buy in quantity when possible, if adequate storage is available
    e. Recognize bargains
    f. Know grades and brands of food
    g. Compare labels for weights and ingredients
    h. Buy less expensive forms of food
    i. Avoid impulse buying
    j. Compare nutritive value of snack foods; limit buying of empty calorie foods
    k. Store foods properly to avoid spoilage and loss of nutrients
    l. Use perishable foods as soon as possible
    m. Use leftover foods
    n. Buy day-old bakery goods at reduced prices

11. a. 5
    b. 3
    c. 7
    d. 1
    e. 4
    f. 6
    g. 2
    h. 10
    i. 8
    j. 9

12. a. More palatable
    b. Powdered
    c. Add dry when preparing foods to increase nutrients; use same as fresh milk
    d. Refrigerate after opening
    e. Cook at low temperature for short time; more flavorful if served at room temperature
    f. Eggs
    g. Whole grain products have more nutrients than refined products; sugared cereals are less economical
    h. Store fresh meat in refrigerator in loosely covered container; store cooked meat in tightly covered containers; may be frozen for longer storage

i. Fruits and Vegetables

j. Cook only until tender using as little water as possible; preserve color of peeled fruits by putting them in weak salt or acid solution; cooking liquids contain dissolved nutrients and should be used; avoid overcooking; home-canned vegetables should be boiled for 20 minutes

13. a. Chemical poisons in foods

b. Chemicals added to foods

c. Disease-producing organisms in foods

14. a. By animals

b. By food handlers and shoppers

c. Through improper preparation or storage of food

15. b, d, e, f, h, i, j

16. a. Height and weight

b. Illness or diagnosis

c. Age

17. Description should include:

a. Before meal care

1) Provide for elimination

a) Offer the bedpan or urinal or assist to the bathroom before mealtime

b) Remember that interrupting the meal for elimination may be distressful to the patient

c) If patient is uncomfortable from not having eliminated prior to mealtime, appetite may be decreased

2) Give mouth and hand care

a) Assist patient in brushing teeth or cleaning dentures and in using mouthwash if desired

b) Help prevent spread of infection through hand cleanliness

3) Position patient

a) Assist patient to sit up in a chair, if possible

b) Elevate patient to a sitting position if permissible, if patient needs to remain in bed

c) Position overbed table for the convenience of the patient

d) Prepare a place for the tray to be set on the patient's bedside table, if the patient must remain recumbent

4) Prepare the environment

a) Create an attractive environment by putting away utensils such as emesis basin, bedpan, or urinal

b) Place a fresh glass of water within the patient's reach

b. After meal care

1) Assist with mouth care

2) Straighten bed and remove crumbs

3) Place patient in a comfortable position or help him or her return to bed if patient has been up; adjust communication device

4) Place food covers back on tray and return tray to proper place

5) Note and record amount and kinds of food eaten

18. a. Check name and room number so each patient receives the correct tray

b. Serve one tray at a time to avoid dropping tray or spilling liquids

c. Serve trays promptly so foods are at the desirable serving temperature

d. Check each tray to see that it is complete

e. See that each patient who should have a tray receives one

f. Serve patients who need to be fed after the other patients to allow health personnel to feed them with a minimum of interruptions

19. Description should include:

a. Place tray on table with main dish closest to patient

b. Remove food covers and put them to one side

c. Help patient as needed with cutting food, buttering bread, and pouring beverage; place food and communication device so they are easily reached

d. Allow patient ample time to eat; stress importance of therapeutic diet, if necessary; if patient does not eat, try to determine the reason

e. Avoid unnecessary interruptions during mealtime, such as giving treatments or medications

f. Make sure complaints about the food or food service receive prompt attention; if necessary, make arrangements for patient to discuss the matter with the dietician

20. Evaluated to the satisfaction of the instructor

21. Evaluated to the satisfaction of the instructor

22. Evaluated to the satisfaction of the instructor

23. Performance skills evaluated to the satisfaction of the instructor

CARBOHYDRATES, PROTEINS, AND FATS
UNIT II

UNIT OBJECTIVE

After completion of this unit, the student should be able to use information on carbohydrates, proteins, and fats to list foods of nutritional value, improve the diet, and assist in patient education. This knowledge will be evidenced by completion of assignment sheet and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with carbohydrates, proteins, and fats to the correct definitions.
2. List principle sources of carbohydrates.
3. Distinguish between functions of carbohydrates and proteins.
4. Select from a list effects of excessive carbohydrates in the diet.
5. Distinguish between kinds of protein, what they contain, and their sources.
6. Describe sources of fat in the diet.
7. Distinguish between saturated and unsaturated fats.
8. Select from a list functions of fats.
9. Describe essential fatty acids.
10. Select from a list characteristics of cholesterol.
11. Classify foods according to cholesterol levels.
12. Select from a list effects of excessive fats in the diet.
13. List the number of calories in one gram of carbohydrate, protein, and fat.
14. Match carbohydrates, proteins, and fats to the correct percentages needed in the daily diet.
15. Compute carbohydrate, protein, and fat content.

CARBOHYDRATES, PROTEINS, AND FATS
UNIT II

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information sheet.

   C. Discuss unit and specific objectives.

   D. Discuss information sheet.

   E. Use models of food to show groups with needed carbohydrates, proteins, and fats.

   F. Make poster of various foods that are high in carbohydrates but empty in calories.

   G. Provide students with assignment sheet.

   H. Provide students with a table of nutritive values for foods to use in Assignment Sheet #1.

   I. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Assignment Sheet #1--Compute Carbohydrate, Protein, and Fat Content

   D. Test

   E. Answers to test

III. Unit reference--Rogers, Helen. *Nursing I: A Course of Study.* Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/ Curriculum and Instructional Materials Center, 1974.

IV. Films:

   A. *Before You Take That Bite.* Color, 14 min., Oklahoma State Department of Health, 1977. Available from Oklahoma State Department of Health, Northeast Tenth and Stonewall, Oklahoma City, Oklahoma 73104.

B. *All American Meal.* Color, 11 min., Barr Films, 1974. Available from Barr Films, 3490 East Foothill Boulevard, Pasadena, California 91107.

(NOTE: This film is available *only* to Oklahoma teachers on a free-loan basis from the Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order from the address listed above.)

V. Filmstrip--*Concepts in Nutrition: Carbohydrates, Lipids, and Proteins.* Available from Trainex Corporation, Box 116, Garden Grove, California 92642.

CARBOHYDRATES, PROTEINS, AND FATS
UNIT II

INFORMATION SHEET

I. Terms associated with carbohydrates, proteins, and fats

A. Carbohydrates--Chemical compounds of carbon, hydrogen, and oxygen; starches and sugars

B. Proteins--Complex organic compounds containing carbon, hydrogen, oxygen, nitrogen, usually sulfur, and sometimes iron, phosphorus, iodine, and copper

C. Fats--Combination of fatty acids and glycerol containing the elements carbon, hydrogen, and oxygen

(NOTE: Fats contain the same elements as carbohydrates but in different proportions.)

D. Amino acids--Chemical compounds which are components of proteins

E. Hydrochloric acid--Normal constituent of gastric juices produced by glands in the stomach

F. Lipid--Oily substance not soluble in water

G. Rancid--Term applied to fats that have undergone decomposition with the liberation of fatty acids

H. Hydrogenation--Addition of hydrogen to unsaturated fats to make a saturated fat

I. Dental caries--Gradual decay of the enamel and dentin of a tooth

J. Oxidation--Combining with oxygen

K. Synthesis--Combining of simple substances to form compounds

L. Gram--Metric unit of weight

(NOTE: A gram is approximately equal to 15 grains.)

M. Obesity--Abnormal amount of fat in the body

II. Principle sources of carbohydrates

A. Grains and grain products

Examples: Bread; cereals; macaroni products

B. Sugar and sugar products

Examples: Honey; corn syrup; molasses; candy

INFORMATION SHEET

C. Vegetables

Examples: Potatoes; corn; peas; beans

D. Fruits

Examples: Bananas; apples; pears

E. Milk and dairy products

III. Functions of carbohydrates and proteins

A. Functions of carbohydrates

1. Provide a quick source of calories
2. Produce heat and energy
3. Spare protein for body building
4. Aid in efficient oxidation of fats

   (NOTE: Otherwise, ketones are formed. Keytones are acids in the body that are the end products of fat metabolism.)

5. Decrease oxidation of protein for energy purposes

   (NOTE: When there are not enough carbohydrates for energy, the body breaks down tissue fats and protein.)

6. Provide glucose, the only source of energy for nerve tissue
7. Provide lactose

   (NOTE: Lactose encourages the growth of favorable intestinal bacteria, has laxative properties, and enhances the absorption of calcium.)

B. Functions of proteins

1. Build and repair tissues
2. Are normal constituents of all body fluids except bile and urine
3. Maintain water balance
4. Help make body secretions, enzymes, hormones, and milk
5. Help form antibodies
6. Combine with iron to form hemoglobin
7. Carry needed vitamins and minerals

INFORMATION SHEET

IV. Effects of excessive carbohydrates in the diet

- A. Increase incidence of dental caries
- B. Cause obesity
- C. May irritate gastrointestinal tract
- D. Depress appetite

  (NOTE: If empty calorie food instead of food from the basic four food groups is consumed, malnutrition could result. Empty calorie foods are those with little or no food value except calories. These include refined sugar, alcohol, soft drinks, some cooking fats, and some refined cereals.)

V. Kinds of protein, what they contain, and their sources

- A. Complete proteins
  1. Contain all essential amino acids; build and repair tissues
  2. Are found in meat, fish, poultry, eggs, milk, and cheese
- B. Incomplete proteins
  1. Contain only part of the essential amino acids; cannot maintain life or support growth by themselves
  2. Are found in gelatin, cereals, nuts, peanuts, and vegetables such as corn, peas, and beans

     (NOTE: Soybeans are considered a complete protein, but lack sufficient amounts of amino acids.)

VI. Sources of fat in the diet

- A. Visible--Fats seen in butter, margarine, cooking oils, and visible fats in meats
- B. Invisible--Fats hidden in meat, milk and dairy products, egg yolk, fish, chocolate, nuts, and baked products

  (NOTE: After visible fat is removed from meat, the remainder is approximately six percent hidden fat.)

VII. Saturated and unsaturated fats

- A. Saturated
  1. Each carbon atom in the fatty acid carries all hydrogen atoms possible
  2. Fats that are usually solid at room temperature

INFORMATION SHEET

3. Oily fats that can be converted to solid fats by hydrogenation

   (NOTE: Saturated fats are found in meat, eggs, dairy products, hydrogenated fats, and chocolate.)

B. Unsaturated

1. Fats that have one or more places where hydrogen can be added

   (NOTE: Mono-unsaturated fat has one place and polyunsaturated fat has two or more places where hydrogen can be added. Margarine and many common shortenings are prepared in this way.)

2. Fats that are liquid at room temperature

   (NOTE: Unsaturated fats are found in vegetable oils such as cottonseed, soybean, corn, olive, peanut, and safflower, and in the fat of fish.)

VIII. Functions of fats

A. Supply heat and energy

(NOTE: Any tissue, except nerve tissue, can utilize fat as a source of energy.)

B. Act as insulation

C. Provide padding to protect vital organs

(NOTE: Excessive fat around vital organs interferes with their functions.)

D. Carry fat-soluble vitamins A, D, E, and K

E. Help maintain body functions

F. Decrease vitamin B_1 requirement

(NOTE: When fat consumption is adequate, less B_1 is needed.)

G. Slow digestion in stomach

(NOTE: A fatty meal remains in the stomach longer and prevents quick return of the feeling of hunger.)

H. Add flavor to many foods

(NOTE: Excess use of fats may conceal natural flavor of foods.)

I. Spare protein from being burned for energy

J. Supply cholesterol

INFORMATION SHEET

IX. Essential fatty acids

- A. Are needed for normal cells and metabolism
- B. Cannot be manufactured by the body
- C. Are reduced in a fat by hydrogenation
- D. Are found in egg yolks, butter, meat, and vegetable oils such as olive, corn, cottonseed, and soybean

X. Characteristics of cholesterol

- A. Is a normal component of the blood and all body cells, especially brain and nerve tissue
- B. Is a precursor of vitamin D and of the adrenal and sex (gonadal) hormones

  (NOTE: A precursor is a substance which the body converts into another, more useable substance.)
- C. Is manufactured by the body from food
- D. May cause atherosclerosis or deposits of cholesterol and blood plasma on the walls of blood vessels

XI. Classifications of foods according to cholesterol levels

- A. Highest
  1. Organ meats

     Examples: Brains, liver, kidney
  2. Shellfish

     Examples: Lobster, oysters, shrimp
  3. Egg yolk
  4. Animal fat
- B. Lowest
  1. Fruits and vegetables
  2. Breads and cereals
  3. Skim milk, buttermilk, uncreamed cottage cheese

INFORMATION SHEET

4. Jelly, syrup, sugar
5. Egg white
6. Vegetable fat, peanut butter

(NOTE: There is a controversy that high levels of cholesterol contribute to heart conditions. Research is still being done to determine if this is true.)

XII. Effects of excessive fats in the diet

A. Cause obesity

B. Decrease digestion and absorption of food products

C. Interfere with absorption of calcium by forming an insoluble soap that will not diffuse through the intestinal wall

D. Cause ketosis unless adequate carbohydrates are present to oxidize fats

E. Increase surgical risk

F. Increase incidence of cerebral damage, heart disease, diabetes mellitus, and kidney failure

XIII. Number of calories in one gram of carbohydrate, protein, and fat

A. Carbohydrate--Four

B. Protein--Four

C. Fat--Nine

XIV. Percentages of carbohydrates, proteins, and fats needed in the daily diet

A. Carbohydrates--40-50 percent

B. Proteins--10-15 percent

C. Fats--25-30 percent

(NOTE: Most Americans have a fat intake of 40 percent. In countries where fat intake is approximately 20 percent and more unsaturated fats are used, the incidence of atherosclerosis is less.)

CARBOHYDRATES, PROTEINS, AND FATS
UNIT II

ASSIGNMENT SHEET #1--COMPUTE CARBOHYDRATE, PROTEIN, AND FAT CONTENT

NAME ______________________________ SCORE ________________

Carbohydrates, proteins, and fats are essential in a well-balanced, healthy diet. In the areas below, write down all foods that you consumed in your diet yesterday. Then using the tables provided by your instructor, compute the grams of carbohydrates, proteins, and fats. Answer the questions on the following page and hand both sheets to your instructor.

	CARBOHYDRATES	PROTEINS	FATS	CALORIES
BREAKFAST				
SNACK				
LUNCH				
SNACK				
DINNER				
SNACK	TOTALS	TOTALS	TOTALS	TOTALS

ASSIGNMENT SHEET #1

1. What were the total grams of carbohydrates consumed? ____________________
2. What were the total grams of protein consumed? ____________________
3. What were the total grams of fats consumed? ____________________
4. What percentage of your diet was carbohydrates? __________ Proteins? __________ Fats? ____________________
5. Do these percentages meet the recommended percentages needed in the daily diet?
   ____
6. What percentage of the total calories was derived from carbohydrates? __________ Proteins? ____________ Fats? ____________
7. What improvements could you make in your diet? ____________________
   ____

CARBOHYDRATES, PROTEINS, AND FATS
UNIT II

TEST

NAME ______________________________ SCORE ________________

1. Match terms associated with carbohydrates, proteins, and fats to the correct definitions. Write the correct numbers in the blanks.

_____a. Abnormal amount of fat in the body

_____b. Oily substance not soluble in water

_____c. Complex organic compounds containing carbon, hydrogen, oxygen, nitrogen, usually sulfur, and sometimes iron, phosphorus, iodine, and copper

_____d. Gradual decay of the enamel and dentin of a tooth

_____e. Chemical compounds of carbon, hydrogen, and oxygen; starches and sugars

_____f. Normal constituent of gastric juices produced by glands in the stomach

_____g. Chemical compounds which are components of proteins

_____h. Metric unit of weight

_____i. Term applied to fats that have undergone decomposition with the liberation of fatty acids

_____j. Combining with oxygen

_____k. Combination of fatty acids and glycerol containing the elements carbon, hydrogen, and oxygen

_____l. Addition of hydrogen to unsaturated fats to make a saturated fat

_____m. Combining of simple substances to form compounds

1. Carbohydrates
2. Proteins
3. Fats
4. Amino acids
5. Hydrochloric acid
6. Lipid
7. Rancid
8. Hydrogenation
9. Dental caries
10. Oxidation
11. Synthesis
12. Gram
13. Obesity

2. List principle sources of carbohydrates.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

3. Distinguish between functions of carbohydrates and proteins. Write a "C" for carbohydrates and a "P" for proteins in the correct blanks.

_____a. Are normal constituents of all body fluids except bile and urine

_____b. Provide lactose

_____c. Aid in efficient oxidation of fats

_____d. Help form antibodies

_____e. Provide a quick source of calories

_____f. Maintain water balance

_____g. Carry needed vitamins and minerals

_____h. Build and repair tissues

_____i. Produce heat and energy

_____j. Help make body secretions, enzymes, hormones, and milk

_____k. Decrease oxidation of protein for energy purposes

_____l. Combine with iron to form hemoglobin

_____m. Provide glucose, the only source of energy for nerve tissue

_____n. Spare protein for body building

4. Select from the following list effects of excessive carbohydrates in the diet. Mark an "X" in the correct blanks.

_____a. Increase incidence of dental caries

_____b. May irritate gastrointestinal tract

_____c. Aid in decreasing cellulite

_____d. Cause obesity

_____e. Depress appetite

_____f. Cause blood dyscrasia

5. Distinguish between kinds of protein, what they contain, and their sources. Write "CP" for complete protein and "IP" for incomplete protein in the correct blanks.

______a. Are found in gelatin, cereals, nuts, peanuts, and vegetables such as corn, peas, and beans

______b. Contain all essential amino acids; build and repair tissues

______c. Are found in meat, fish, poultry, eggs, milk, and cheese

______d. Contain only part of the essential amino acids; cannot maintain life or support growth by themselves

6. Describe sources of fat in the diet.

a. Visible--____

____

b. Invisible-- ____

____

____

7. Distinguish between saturated and unsaturated fats. Write an "S" for saturated fats and a "U" for unsaturated fats in the correct blanks.

______a. Fats that are liquid at room temperature

______b. Fats that are usually solid at room temperature

______c. Each carbon atom in the fatty acid carries all hydrogen atoms possible

______d. Fats that have one or more places where hydrogen can be added

______e. Oily fats that can be converted to solid fats by hydrogenation

8. Select from the following list functions of fats. Mark an "X" in the correct blanks.

______a. Carry fat-soluble vitamins A, D, E, and K

______b. Add flavor to many foods

______c. Increase production of hormones

______d. Supply cholesterol

______e. Decrease lipid content

______f. Supply heat and energy

______g. Provide padding to protect vital organs ______h. Slow digestion in stomach

______i. Promote diuresis

______j. Prevent mental confusion

______k. Act as insulation

______l. Spare protein from being burned for energy

______m. Promote skin tanning

______n. Decrease vitamin B_1 requirement

______o. Help maintain body functions

9. Describe essential fatty acids.

____

____

____

____

____

10. Select from the following list characteristics of cholesterol. Mark an "X" in the correct blanks.

______ a. Is manufactured by the body from food

______b. Is a precursor of vitamin D and of the adrenal and sex (gonadal) hormones

______c. May cause lymphatic disorders

______d. Is a normal component of the blood and all body cells, especially brain and nerve tissue

______e. Is fat soluble

______f. May cause atherosclerosis or deposits of cholesterol and blood plasma on the walls of blood vessels

11. Classify foods according to cholesterol levels. Write an "H" for highest and an "L" for lowest in the correct blanks.

______a. Skim milk, buttermilk, uncreamed cottage cheese

______b. Egg yolk

______c. Breads and cereals

______d. Vegetable fat, peanut butter

______e. Animal fat

______f. Fruits and vegetables

______g. Jelly, syrup, sugar

______h. Organ meats

______i. Egg white

______j. Shellfish

12. Select from the following list effects of excessive fats in the diet. Mark an "X" in the correct blanks.

______a. Are supporting structures of muscles

______b. Decrease digestion and absorption of food products

______c. Cause obesity

______d. Promote skin tone and elasticity

______e. Increase incidence of cerebral damage, heart disease, diabetes mellitus, and kidney failure

______f. Cause ketosis unless adequate carbohydrates are present to oxidize fats

______g. Increase surgical risk

______h. Give increased energy

______i. Interfere with absorption of calcium by forming an insoluble soap that will not diffuse through the intestinal wall

13. List the number of calories in one gram of carbohydrate, protein, and fat.

a. Carbohydrate--______________________________

b. Protein--______________________________

c. Fat-- ______________________________

14. Match carbohydrates, proteins, and fats to the correct percentages needed in the daily diet. Write the correct numbers in the blanks.

______a. 40-50 percent	1. Fats
______b. 10-15 percent	2. Carbohydrates
______c. 25-30 percent	3. Proteins

15. Compute carbohydrate, protein, and fat content.

(NOTE: If activity 15 has not been finished before the test, ask your instructor when it should be completed.)

CARBOHYDRATES, PROTEINS, AND FATS
UNIT II

ANSWERS TO TEST

1. a. 13
   b. 6
   c. 2
   d. 9
   e. 1
   f. 5
   g. 4
   h. 12
   i. 7
   j. 10
   k. 3
   l. 8
   m. 11
2. a. Grains and grain products
   b. Sugar and sugar products
   c. Vegetables
   d. Fruits
   e. Milk and dairy products
3. a. P
   b. C
   c. C
   d. P
   e. C
   f. P
   g. P
   h. P
   i. C
   j. P
   k. C
   l. P
   m. C
   n. C
4. a, b, d, e
5. a. IP
   b. CP
   c. CP
   d. IP

6. Description should include:
   a. Visible--Fats seen in butter, margarine, cooking oils, and visible fats in meats
   b. Invisible--Fats hidden in meat, milk and dairy products, egg yolk, fish, chocolate, nuts, and baked products
7. a. U
   b. S
   c. S
   d. U
   e. S
8. a, b, d, f, g, h, k, l, n, o
9. Description should include:
   a. Are needed for normal cells and metabolism
   b. Cannot be manufactured by the body
   c. Are reduced in a fat by hydrogenation
   d. Are found in egg yolks, butter, meat, and vegetable oils such as olive, corn, cottonseed, and soybean
10. a, b, d, f
11. a. L
   b. H
   c. L
   d. L
   e. H
   f. L
   g. L
   h. H
   i. L
   j. H
12. b, c, e, f, g, i
13. a. Carbohydrate--Four
   b. Protein--Four
   c. Fat--Nine
14. a. 2
   b. 3
   c. 1
15. Evaluated to the satisfaction of the instructor

VITAMINS AND MINERALS
UNIT III

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of vitamins and minerals in selecting foods rich in these nutrients and in evaluating a diet. This knowledge will be evidenced by completion of an assignment sheet and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with vitamins and minerals to the correct definitions.
2. List body functions that vitamins help regulate.
3. Select from a list general characteristics of vitamins.
4. Distinguish between fat-soluble and water-soluble vitamins.
5. Complete a chart of functions, deficiency symptoms, and sources of selected vitamins.
6. Select from a list functions of minerals.
7. Distinguish between functions of calcium and phosphorus.
8. Select from a list symptoms of calcium deficiency.
9. Distinguish between functions of iron and iodine.
10. List factors that retard absorption of iron.
11. Select from a list functions of sodium and potassium.
12. Match additional trace minerals to their correct functions.
13. Describe the role of vitamins and minerals in the daily diet.
14. Match minerals to their correct sources.
15. Evaluate vitamins and minerals in the diet.

VITAMINS AND MINERALS
UNIT III

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information sheet.

   C. Discuss unit and specific objectives.

   D. Discuss information sheet.

   E. Use models of foods to demonstrate ones with various vitamins and minerals.

   F. Make a bulletin board showing different food groups rich in vitamins and minerals.

   G. Use supplementary nutrition texts for more in-depth information.

   H. Invite hospital dietician or nutritionist to discuss the need for vitamins and minerals in the diet.

   I. Show photos of various diseases caused by vitamin and mineral deficiencies.

   J. Provide students with assignment sheet.

   K. Provide students with tables from nutrition text to complete Assignment Sheet #1.

   L. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Assignment Sheet #1--Evaluate Vitamins and Minerals in the Diet

   D. Test

   E. Answers to test

III. Unit references:

  A. Rogers, Helen. *Nursing I: A Course of Study*. Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

  B. Fleck, Henrietta. *Introduction to Nutrition*. New York: Macmillan Publishing Company, Inc., 1976.

IV. Filmstrip--*Concepts in Nutrition: Diet and Health*. Available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

VITAMINS AND MINERALS
UNIT III

INFORMATION SHEET

I. Terms associated with vitamins and minerals

   A. Vitamins--Chemical compounds needed in very small amounts for various body processes

   B. Avitaminosis--Disease due to lack of vitamins in the diet

   C. Hypervitaminosis--Toxicity caused by an excessive amount of one or more vitamins

   D. Minerals--Essential elements which comprise four percent of the total weight of the body

   E. Intrinsic factor--Mucoprotein found in gastric juice; essential for the assimilation of vitamin B_{12}

   F. Rickets--Softened bone condition in children resulting from deficient deposits of calcium in bone-forming cartilages

   G. Pellagra--Disease due to insufficient niacin and protein with dermatitis, diarrhea, anemia, and mental symptoms

   H. Scurvy--Deficiency characterized by loss of energy, pain in limbs, weakness, and anemia

II. Body functions that vitamins help regulate

   A. Digestion

   B. Cell metabolism

   C. Growth and development

   D. Reproduction

   E. General good health

   F. Appetite

   G. Resistance

III. General characteristics of vitamins

   A. Some vitamins are lost by exposure to air and in storage of food

   B. Water-soluble vitamins may be lost in cooking

   C. High temperatures destroy vitamins

INFORMATION SHEET

D. In some foods vitamins are found chiefly in the part usually discarded

Examples: Outer leaves of lettuce; peelings

E. Sufficient fats are needed to provide a vehicle for fat-soluble vitamins

IV. Fat-soluble and water-soluble vitamins

A. Fat-soluble

1. Vitamin A
2. Vitamin D
3. Vitamin E
4. Vitamin K

B. Water-soluble

1. Vitamin C
2. B-complex vitamins

Examples: Thiamine; riboflavin; niacin; biotin; folic acid; pyridoxine; cobalamin

INFORMATION SHEET

V. Functions, deficiency symptoms, and sources of selected vitamins

A. FAT-SOLUBLE VITAMINS

VITAMIN	FUNCTIONS	DEFICIENCY SYMPTOMS	SOURCES
A	Essential for Growth Health of eyes Health of skin and mucous membranes	Night blindness Increased susceptibility to infection Changes in skin and mucous membranes	Liver, liver sausage Butter, fortified margarine Whole milk, cream, cheese Egg yolks Green and yellow vegetables Yellow fruits Fish liver oils
D	Essential for Normal bone growth Regulation of calcium and phosphorus metabolism Normal growth of teeth	Rickets Soft bones Poor teeth Lowered blood calcium and phosphorus Poor posture	Sunshine Fish liver oils Vitamin D milk Egg yolks Liver
E	Helps prevent rupture of red blood cells Helps protect muscle tissue Helps in metabolism of polyunsaturated fats (NOTE: The full extent of these functions is not presently known.)	Increased rate of hemolysis of red blood cells	Wheat germ Vegetable oils Egg yolk Nuts Dark green, leafy vegetables
K	Essential for normal clotting of blood	Slow clotting of blood Hemorrhagic disease in newborn	Green leafy vegetables Cauliflower, cabbage Pork liver

INFORMATION SHEET

B. WATER-SOLUBLE VITAMINS

VITAMIN	FUNCTIONS	DEFICIENCY SYMPTOMS	SOURCES
Thiamine B_1	Essential for Carbohydrate metabolism Healthy appetite Nerve function	Anorexia Fatigue Nerve disorders Impaired carbohydrate metabolism	Meat, especially pork Whole-grain and enriched cereals Yeast Legumes, especially soybeans Organ meats, especially liver
Riboflavin B_2	Essential for Oxidation Health of skin and mouth Healthy eyes Metabolism of food	Loss of weight and appetite Eye sensitivity, visual defects Inflammation of lips, tongue Digestive distrubances	Milk, dairy foods Enriched bread and cereals Organ meats Green leafy vegetables Brewer's yeast
Niacin (Nicotinic acid)	Essential for Prevention of pellagra Metabolism of food	Fatigue Sore mouth and tongue Diarrhea and nausea Nervous disorders Anorexia Pellagra	Organ meats Poultry and fish Yeast Enriched breads and cereals Peanuts
Pyridoxine B_6	Essential for metabolism of proteins	Anemia Kidney stones Dermatitis Nausea and vomiting Irritability	Whole-grain cereals Meat, especially organ meats Soybeans Peanuts
Cobalamin B_{12}	Essential for Metabolism Healthy red cells Treatment of pernicious anemia	Sore tongue Signs of spinal cord degeneration Growth retardation	Lean meat Organ meats Eggs Dairy products
C	Essential for Healthy teeth, gums Healing of wounds Metabolism of food	Sore gums Stiff, aching joints Tendency to bruise easily Susceptibility to disease Scurvy	Citrus fruits Potatoes Tomatoes Raw vegetables Carrots

INFORMATION SHEET

VI. Functions of minerals

A. Are constituents of bones and teeth

B. Aid in maintenance of nerve and muscle action

C. Maintain acid-base balance

D. Combine with organic compounds to form hormones

E. Aid in controlling water balance

F. Help utilize nutrients

VII. Functions of calcium and phosphorus

A. Calcium

1. Is involved in muscle contraction and relaxation

   (NOTE: In the absence of calcium, muscles lose their ability to contract.)

2. Maintains regular contractions of heart muscle
3. Aids in coagulation of blood
4. Aids in transmission of nerve impulses
5. Affects cell wall permeability
6. Activates certain enzymes

   (NOTE: Calcium activates lipase, the enzyme that metabolizes fats, and adenosine triphosphate or ATP, which supplies energy to cells to function.)

7. Maintains acid-base balance
8. Aids in efficient utilization of iron

B. Phosphorus

1. Is a constituent of calcium phosphate in bones
2. Is part of the nucleus of every body cell
3. Aids in acid-base maintenance
4. Aids in metabolism of fats and carbohydrates

INFORMATION SHEET

5. Aids in activity of some enzymes

   (NOTE: Phosphorus is an important component of phospholipids, enzymes which are involved in the emulsification and transportation of fats.)

VIII. Symptoms of calcium deficiency

A. Poor bone formation in children, which causes rickets

B. Softening of the bones in adults, which causes osteomalacia

C. Malformed or decaying teeth

D. Slow clotting of blood

E. Damage to teeth and bones before and after pregnancy

F. Tetany

IX. Functions of iron and iodine

A. Iron--Helps form hemoglobin

B. Iodine--Helps form thyroid hormone which regulates metabolism rate

X. Factors that retard absorption of iron

A. Insufficient hydrochloric acid in stomach and duodenum

B. Excessive use of soda or alkaline medications

C. Decrease in absorption due to diarrhea

D. Deficiency of copper

E. Deficiency of ascorbic acid

XI. Functions of sodium and potassium

A. To regulate acid-base balance

B. To regulate cell permeability

C. To regulate nerve irritability

D. To regulate water balance

E. To regulate osmotic pressure

INFORMATION SHEET

XII. Additional trace minerals

(NOTE: Many other trace elements are found in the body and are adequately supplied by a nutritious diet. Taken in large amounts, these minerals can produce toxic effects.)

A. Fluorine--Increases resistance to dental caries

B. Copper--Serves as a catalyst for iron metabolism

C. Manganese--Influences blood formation and endocrine gland function

D. Zinc--Is a component of insulin and enzymes

E. Cobalt--Is a component of vitamin B_{12}

F. Sulfur--Is a component of saliva, bile, and insulin

G. Magnesium--Is necessary for metabolism, bones, muscles, nerves, and organs

XIII. Role of vitamins and minerals in the daily diet

A. They have no caloric value

B. They regulate metabolism and are essential to life

C. Vitamins A and D are the only ones stored in the body

D. Water-soluble vitamins and minerals can be lost through cooking

(NOTE: They dissolve in the liquid used for cooking and are discarded. To preserve more of these essential elements, cook foods as short a time as possible and use a lid to prevent evaporation of steam.)

E. Well-balanced diet including the basic four food groups provides sufficient vitamins and minerals for most people

F. Vitamins and minerals will not relieve a physical illness unless the condition was caused by a lack of that particular vitamin or mineral

XIV. Minerals and their sources

A. Calcium--Milk and milk products; egg yolks; green, leafy vegetables

B. Phosphorus--Milk and milk products; egg yolks; whole grains; meat; fish; poultry; legumes; nuts

C. Iron--Organ meats, especially liver; lean red meat; legumes; green, leafy vegetables; potatoes; tomatoes; whole-grain and enriched cereals; egg yolks; peaches; apricots; prunes; raisins

INFORMATION SHEET

D. Iodine--Iodized salt; ocean fish; shellfish

E. Sodium and potassium--Table salt; baking powder; baking soda; dairy products; meat; whole grains; fruits, such as oranges, bananas, and apricots

VITAMINS AND MINERALS
UNIT III

ASSIGNMENT SHEET #1--EVALUATE VITAMINS AND MINERALS IN THE DIET

NAME ____ SCORE ________________

"You are what you eat" is a common statement. Vitamins and minerals in the diet contribute much to how you look and how you feel. Without these needed nutrients, you can suffer from various deficiency dieases. How do you measure up in the evaluation of vitamins and minerals in your diet?

Using the tables provided by your instructor, write on the following pages the diet that you consumed yesterday and the amount of each vitamin and mineral contained in the foods and compare these with the Recommended Daily Dietary Allowances (RDA) given in your text. Hand these sheets to your instructor for evaluation or discuss in class.

ASSIGNMENT SHEET #1

	Vitamin A	Vitamin D	Vitamin E	Vitamin C	Thiamin B_1	Niacin	Riboflavin B_2	Vitamin B	Calcium	Phosphorus	Magnesium	Iodine	Iron	Zinc
BREAKFAST														
SNACK														
LUNCH														

ASSIGNMENT SHEET #1

	Vitamin A	Vitamin D	Vitamin E	Vitamin C	Thiamin B_1	Niacin	Riboflavin B_2	Vitamin B	Calcium	Phosphorus	Magnesium	Iodine	Iron	Zinc
SNACK														
DINNER														
SNACK														
TOTALS														

VITAMINS AND MINERALS
UNIT III

TEST

NAME ______________________________ SCORE ______________

1. Match terms associated with vitamins and minerals to the correct definitions. Write the correct numbers in the blanks.

_____ a. Disease due to insufficient niacin and protein with dermatitis, diarrhea, anemia, and mental symptoms

_____ b. Disease due to lack of vitamins in the diet

_____ c. Essential elements which comprise four percent of the total weight of the body

_____ d. Softened bone condition in children resulting from deficient deposits of calcium in bone-forming cartilages

_____ e. Chemical compounds needed in very small amounts for various body processes

_____ f. Deficiency characterized by loss of energy, pain in limbs, weakness, and anemia

_____ g. Mucoprotein found in gastric juice; essential for the assimilation of vitamin B_{12}

_____ h. Toxicity caused by an excessive amount of one or more vitamins

1. Vitamins
2. Avitaminosis
3. Hypervitaminosis
4. Minerals
5. Intrinsic factor
6. Rickets
7. Pellagra
8. Scurvy

2. List body functions that vitamins help regulate.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

g. ______________________________

3. Select from the following list general characteristics of vitamins. Mark an "X" in the correct blanks.

______a. High temperatures destroy vitamins

______b. Sufficient fats are needed to provide a vehicie for fat-soluble vitamins

______c. Water-soluble vitamins are released only when prepared in water

______d. Some vitamins are lost by exposure to air and in storage of food

______e. Vitamins are absorbed in the large intestine

______f. Vitamins are necessary in the absorption of cholesterol

______g. In some foods vitamins are found chiefly in the part usually discarded

______h. Vitamins are released only in the presence of the extrinsic factor

______i. Water-soluble vitamins may be lost in cooking

4. Distinguish between fat-soluble and water-soluble vitamins. Write an "FS" for fat-soluble and a "WS" for water-soluble vitamins in the correct blanks.

______a. Vitamin E

______b. Vitamin A

______c. Vitamin C

______d. Vitamin D

______e. B-complex vitamins

______f. Vitamin K

5. Complete the following chart of functions, deficiency symptoms, and sources of selected vitamins.

A. FAT-SOLUBLE VITAMINS

VITAMIN	FUNCTIONS	DEFICIENCY SYMPTOMS	SOURCES
A	Essential for Growth Health of eyes Health of skin and mucous membranes	1) ____________	Liver, liver sausage Butter, fortified margarine Whole milk, cream, cheese Egg yolks Green and yellow vegetables Yellow fruits Fish liver oils
D	2) ____________	Rickets Soft bones Poor teeth Lowered blood calcium and phosphorus Poor posture	Sunshine Fish liver oils Vitamin D milk Egg yolks Liver
E	Helps prevent rupture of red blood cells Helps protect muscle tissue Helps in metabolism of polyunsaturated fats	Increased rate of hemolysis of red blood cells	3) ____________
K	Essential for normal clotting of blood	4) ____________	Green leafy vegetables Cauliflower, cabbage Pork liver

B. WATER-SOLUBLE VITAMINS

VITAMIN	FUNCTIONS	DEFICIENCY SYMPTOMS	SOURCES
Thiamine B_1	1) ____ ____ ____ ____	Anorexia Fatigue Nerve disorders Impaired carbohydrate metabolism	Meat, especially pork Whole-grain and enriched cereals Yeast Legumes, especially soybeans Organ meats, especially liver
Riboflavin B_2	Essential for Oxidation Health of skin and mouth Healthy eyes Metabolism of food	Loss of weight and appetite Eye sensitivity, visual defects Inflammation of lips, tongue Digestive distrubances	2) ____ ____ ____ ____ ____
Niacin (Nicotinic acid)	Essential for Prevention of pellagra Metabolism of food	3) ____ ____ ____ ____ ____ ____	Organ meats Poultry and fish Yeast Enriched breads and cereals Peanuts
Pyridoxine B_6	4) ____ ____	Anemia Kidney stones Dermatitis Nausea and vomiting Irritability	Whole-grain cereals Meat, especially organ meats Soybeans Peanuts
Cobalamin B_{12}	Essential for Metabolism Healthy red cells Treatment of pernicious anemia	5) ____ ____ ____ ____	Lean meat Organ meats Eggs Dairy products
C	Essential for Healthy teeth, gums Healing of wounds Metabolism of food	Sore gums Stiff, aching joints Tendency to bruise easily Susceptibility to disease Scurvy	6) ____ ____ ____ ____ ____

6. Select from the following list functions of minerals. Mark an "X" in the correct blanks.

_____a. Provide for integrity of the skin

_____b. Combine with organic compounds to form hormones

_____c. Are constituents of bones and teeth

_____d. Are natural diuretics

_____e. Aid in controlling water balance

_____f. Are natural cathartics

_____g. Prevent incontinence and constipation

_____h. Aid in maintenance of nerve and muscle action

_____i. Help utilize nutrients

_____j. Provide for growth of hair and nails

_____k. Maintain acid-base balance

7. Distinguish between functions of calcium and phosphorus. Write a "C" for calcium and a "P" for phosphorus in the correct blanks.

_____a. Maintains acid-base balance

_____b. Is involved in muscle contraction and relaxation

_____c. Aids in acid-base maintenance

_____d. Aids in transmission of nerve impulses

_____e. Is a constituent of calcium phosphate in bones

_____f. Aids in activity of some enzymes

_____g. Maintains regular contractions of heart muscle

_____h. Aids in metabolism of fats and carbohydrates

_____i. Is part of the nucleus of every body cell

_____j. Aids in coagulation of blood

_____k. Activates certain enzymes

_____l. Aids in efficient utilization of iron

_____m. Affects cell wall permeability

8. Select from the following list symptoms of calcium deficiency. Mark an "X" in the correct blanks.

_____a. Slow clotting of blood

_____b. Vertigo

_____c. Poor bone formation in children, which causes rickets

_____d. Tetany

_____e. Diminished vision

_____f. Dehydration

_____g. Malformed or decaying teeth

_____h. Jaundice

_____i. Damage to teeth and bones before and after pregnancy

_____j. Softening of the bones in adults, which causes osteomalacia

9. Distinguish between functions of iron and iodine. Write an "IR" for iron and an "IO" for iodine in the correct blanks.

_____a. Helps form thyroid hormone which regulates metabolism rate

_____b. Helps form hemoglobin

10. List factors that retard absorption of iron.

a. ____

b. ____

c. ____

d. ____

e. ____

11. Select from the following list functions of sodium and potassium. Mark an "X" in the correct blanks.

_____a. To regulate water balance

_____b. To prevent anorexia

_____c. To regulate acid-base balance

_____d. To relieve emotional distress

_____e. To provide neurological integrity ______f. To regulate osmotic pressure

______g. To regulate cell permeability

______h. Must be present for cell division

______i. To regulate nerve irritability

12. Match additional trace minerals to their correct functions. Write the correct numbers in the blanks.

______a. Is a component of insulin and enzymes

______b. Is necessary for metabolism, bones, muscles, nerves, and organs

______c. Increases resistance to dental caries

______d. Is a component of vitamin B_{12}

______e. Serves as a catalyst for iron metabolism

______f. Is a component of saliva, bile, and insulin

______g. Influences blood formation and endocrine gland function

1. Fluorine
2. Copper
3. Manganese
4. Zinc
5. Cobalt
6. Sulfur
7. Magnesium

13. Describe the role of vitamins and minerals in the daily diet.

____

____

____

____

____

____

____

____

____

____

14. Match minerals to their correct sources. Write the correct numbers in the blanks.

_____ a. Milk and milk products; egg yolks; whole grains; meat; fish; poultry; legumes; nuts

_____ b. Table salt; baking powder; baking soda; dairy products; meat; whole grains; fruits, such as oranges, bananas, and apricots

_____ c. Milk and milk products; egg yolks; green, leafy vegetables

_____ d. Iodized salt; ocean fish; shellfish

_____ e. Organ meats, especially liver; lean red meat; legumes; green, leafy vegetables; potatoes; tomatoes; whole-grain enriched cereals; egg yolks; peaches; apricots; prunes; raisins

1. Calcium
2. Phosphorus
3. Iron
4. Iodine
5. Sodium and potassium

15. Evaluate vitamins and minerals in the diet.

(NOTE: If activity 15 has not been finished before the test, ask your instructor when it should be completed.)

VITAMINS AND MINERALS
UNIT III

ANSWERS TO TEST

1. a. 7
   b. 2
   c. 4
   d. 6
   e. 1
   f. 8
   g. 5
   h. 3
2. a. Digestion
   b. Cell metabolism
   c. Growth and development
   d. Reproduction
   e. General good health
   f. Appetite
   g. Resistance
3. a, b, d, g, i
4. a. FS
   b. FS
   c. WS
   d. FS
   e. WS
   f. FS

5. a. Fat-soluble vitamins

   1) Night blindness
      Increased susceptibility to infection
      Changes in skin and mucous membranes

   2) Essential for
      Normal bone growth
      Regulation of calcium and phosphorus metabolism
      Normal growth of teeth

   3) Wheat germ
      Vegetable oils
      Egg yolk
      Nuts
      Dark green, leafy vegetables

   4) Slow clotting of blood
      Hemorrhagic disease in newborn

   b. Water-soluble vitamins

   1) Essential for
      Carbohydrate metabolism
      Healthy appetite
      Nerve function

   2) Milk, dairy foods
      Enriched bread and cereals
      Organ meats
      Green leafy vegetables
      Brewer's yeast

   3) Fatigue
      Sore mouth and tongue
      Diarrhea and nausea
      Nervous disorders
      Anorexia
      Pellagra

   4) Essential for metabolism of proteins

   5) Sore tongue
      Signs of spinal cord degeneration
      Growth retardation

   6) Citrus fruits
      Potatoes
      Tomatoes
      Raw vegetables
      Carrots

6. b, c, e, h, i, k

7. a. C
b. C
c. P
d. C
e. P
f. P
g. C
h. P
i. P
j. C
k. C
l. C
m. C
8. a, c, d, g, i, j
9. a. IO
b. IR
10. a. Insufficient hydrochloric acid in stomach and duodenum
b. Excessive use of soda or alkaline medications
c. Decrease in absorption due to diarrhea
d. Deficiency of copper
e. Deficiency of ascorbic acid
11. a, c, f, g, i
12. a. 4
b. 7
c. 1
d. 5
e. 2
f. 6
g. 3

13. Description should include:
    a. They have no caloric value
    b. They regulate metabolism and are essential to life
    c. Vitamins A and D are the only ones stored in the body
    d. Water-soluble vitamins and minerals can be lost through cooking
    e. Well-balanced diet including the basic four food groups provides sufficient vitamins and minerals for most people
    f. Vitamins and minerals will not relieve a physical illness unless the condition was caused by a lack of that particular vitamin or mineral
14. a. 2
    b. 5
    c. 1
    d. 4
    e. 3
15. Evaluated to the satisfaction of the instructor

BASIC CONCEPTS OF PHYSICAL AND LIFE SCIENCES
UNIT I

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of principles of physical and life sciences, classify the pH of solutions, and demonstrate the transport movement of various materials. This knowledge will be evidenced by completion of assignment sheets, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with basic concepts of physical science to the correct definitions.
2. Distinguish between states of matter.
3. State rules of nature governing the activities of solutions.
4. Distinguish between the kinds of matter.
5. Describe physical and chemical changes.
6. List forms of energy.
7. Distinguish between properties of acids and bases.
8. Describe common properties of acids and bases.
9. Identify the average normal concentration of gastric juice, urine, and blood when given a diagram of the pH scale.
10. Select from a list reasons the human body needs mineral salts.
11. Match terms associated with basic concepts of life sciences to the correct definitions.
12. Distinguish between catabolism and anabolism as parts of metabolism.
13. Match the compounds in protoplasm to their correct functions.
14. Select from a list characteristics of protoplasm.
15. Describe functions of enzymes.

16. Identify basic parts of a cell.
17. Describe basic cell components.
18. Discuss cell mitosis.
19. Distinguish between the types of movement of material through the cell membrane.
20. Match types of passive transport movement to the correct descriptions.
21. Distinguish between isotonic, hypotonic, and hypertonic solutions.
22. Distinguish between characteristics of epithelial and connective tissue.
23. Select from a list types of muscle tissue.
24. Describe nerve tissue.
25. Match types of membranes to the correct descriptions.
26. Match terms associated with points of reference on the body to their correct definitions.
27. Identify the body cavities on a diagram of the body.
28. Label the abdominopelvic regions of the body on a given diagram.
29. Identify directional terms on diagrams of bodies.
30. Describe the anatomical planes.
31. Classify the pH of solutions.
32. Demonstrate the transport movements of materials.

BASIC CONCEPTS OF PHYSICAL AND LIFE SCIENCES
UNIT I

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

  A. Provide students with objective sheet.

  B. Provide students with information, assignment, and job sheets.

  C. Discuss unit objective and specific objectives.

  D. Discuss information, assignment, and job sheets.

  E. Visit a laboratory where students can view different types of cells and tissues under a microscope.

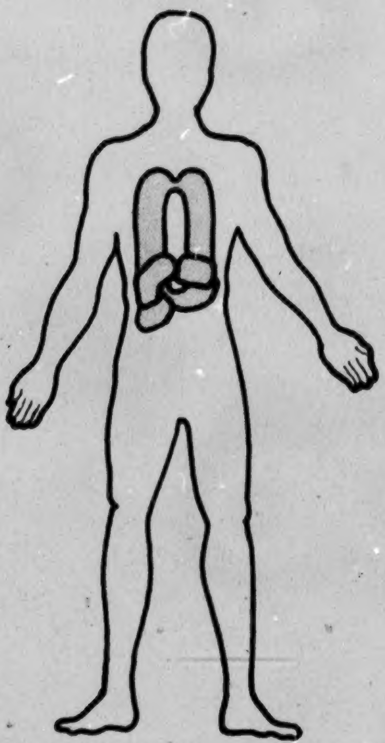
  (NOTE: If you have your own equipment, have students take cheek scrapings, stain the slides, and look at the tissue under the microscope.)

  F. Invite laboratory specialists to talk about their specialties.

  Examples: Histology, pathology

G. Emphasize information on body cavities and direction planes by having students cut out an outline of their body on pieces of white paper. Classmates can team up to cut out the outline. Provide health texts with pictures of organs and have each student cut appropriate organs out of colored construction paper and put them in the correct anatomical area. Hang them up in the classroom and have a contest to vote on the "best body."

Examples: Criteria of judging would include most original ideas, most anatomically correct



H. Provide equipment to complete assignment sheets.

I. Provide equipment and demonstrate skill in job sheet.

J. Allow time for return demonstrations in the laboratory area.

K. Give test.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Transparency masters

   1. TM 1--Forms of Energy
   2. TM 2--pH Scale
   3. TM 3--Basic Parts of a Cell
   4. TM 4-- Physical/Passive Transport Methods of Cells
   5. TM 5--Solutions
   6. TM 6--Epithelial Tissues
   7. TM 7--Epithelial Tissues (continued)
   8. TM 8--Connective Tissues
   9. TM 9--Voluntary Muscle
   10. TM 10--Involuntary Muscle
   11. TM 11--Cardiac Muscle
   12. TM 12--Nerve Cell
   13. TM 13--Body Cavities: Side View
   14. TM 14--Regions of the Abdominopelvic Area
   15. TM 15--Directions
   16. TM 16--Directions (continued)
   17. TM 17--Planes

D. Assignment sheets

   1. Assignment Sheet #1--Classify the pH of Solutions
   2. Assignment Sheet #2--Demonstrate the Transport Movements of Materials

E. Answers to Assignment Sheet #2

F. Test

G. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study.* Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

B. Sloan, Jamee. *Medical Assistant.* Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1981.

C. Hole, John W., Jr. *Human Anatomy and Physiology.* Dubuque: Wm. C. Brown Company Publishers, 1978.

D. Thomas, Virginia E. *Life Sciences for Health Technologies.* Los Angeles: Technicourse Inc., 1970.

IV. Additional resources--Microscopes and slide sets available from National Teaching Aid [illegible]nc., 120 Fulton Avenue, Garden City Park, New York 11040.

BASIC CONCEPTS OF PHYSICAL AND LIFE SCIENCES
UNIT I

INFORMATION SHEET

I. Terms associated with basic concepts of physical science

A. Matter--Physical material having form and weight; anything that occupies space and has weight

B. Plasma--Liquid part of the blood

C. Solution--Liquid containing dissolved solids called *solutes*

D. Energy--That which produces change or results from change; the ability or power to do work

E. Acid--Substance that yields hydrogen ions in solution

F. Base--Substance that yields hydroxyl ions in solution

G. pH--Hydrogen ion concentration of a solution; the degree to which a solution is acidic or basic

H. Ion--Atom or group of atoms carrying an electric charge

I. Mineral salts--Compounds formed from the reaction of an acid with a base

J. Electrolyte--Any compound, when dissolved in water, that separates into charged particles (ions) capable of conducting an electrical current

Examples: Sodium, chlorides, potassium

K. Chemistry--Science which deals with the composition of substances and the changes they undergo

L. Physics--Science dealing with matter and energy and their interactions

M. Distribution--Position, arrangement, or frequency of occurrence

N. Concentration--Relative content or strength of an ingredient

O. Pressure--Strain, stress, or tension due to compression, expansion, pull, or thrust

P. Calorie--Unit used in the measurement of heat energy and the energy values of food

(NOTE: The chemist's calorie is defined as the amount of heat required to raise the temperature of one gram of water from 14.5° to 15.5°C. The nutritionists use the large calorie or the kilocalorie to measure heat energy.)

INFORMATION SHEET

Q. Hydrostatic pressure--Pressure a liquid exerts as a result of its own weight

II. States of matter

A. Solid--Has a definite shape, volume, and weight

Examples: Bones, tissues

B. Liquid--Has a definite volume and weight but assumes the shape of the container in which it is placed

Examples: Plasma, tissue fluid

C. Gas--Has a definite weight but indefinite shape and volume

Example: Oxygen and carbon dioxide in the lungs

III. Rules of nature governing the activities of solutions

A. Solutions always tend toward a state of equal concentration

B. Solutions of higher concentration will tend to flow toward solutions of lower concentration

C. Liquids, including solutions, always flow toward a condition of least possible hydrostatic pressure

IV. Kinds of matter

A. Element--Simple pure substance which cannot be decomposed by ordinary chemical reactions

Examples:
C--Carbon
H--Hydrogen
O--Oxygen
N--Nitrogen
K--Potassium
P--Phosphorus
Na--Sodium
Cl--Chlorine
Fe--Iron
I--Iodine

B. Compound--Two or more elements united in a fixed ratio

Examples: $C_6H_{12}O_6$--Glucose (simple sugar)

NaCl--Sodium chloride (table salt)

H_2O--Water

CO_2--Carbon dioxide

Fe_2O_3--Iron oxide

INFORMATION SHEET

Examples:
NaOH--Sodium hydroxide
HCl--Hydrochloric acid (present in gastric juices)
ZnO--Zinc oxide (used in ointments)
KC1--Potassium chloride
CH_3OH--Methyl or wood alcohol

C. Mixture--Two or more elements or compounds which are not chemically combined

Examples: Blood, urine, milk, salt water, air

V. Physical and chemical changes

- A. Chemical change
  1. Produces a new substance
  2. Is irreversible or reversible only with difficulty

     Examples: Rusting iron, souring milk, burning wood, digesting food
- B. Physical change
  1. Produces no new substance
  2. Is easily reversible

     Examples: Heating iron, freezing water to ice, heating water to steam

VI. Forms of energy (Transparency 1)

- A. Heat
- B. Mechanical
- C. Radiant
- D. Electrical
- E. Chemical

VII. Properties of acids and bases

- A. Acids

  (NOTE: Excessive concentration of acids in body may cause acidosis.)
  1. Sour taste
  2. Pungent odor
  3. pH 7 or below

INFORMATION SHEET

B. Bases

(NOTE: Excessive concentration of bases in the body may cause alkalosis.)

1. Bitter taste
2. Soapy or slippery feeling
3. pH above 7

VIII. Common properties of acids and bases

A. React with each other to produce salts and water

B. Essential to the maintenance of a normal acid-base balance in the body

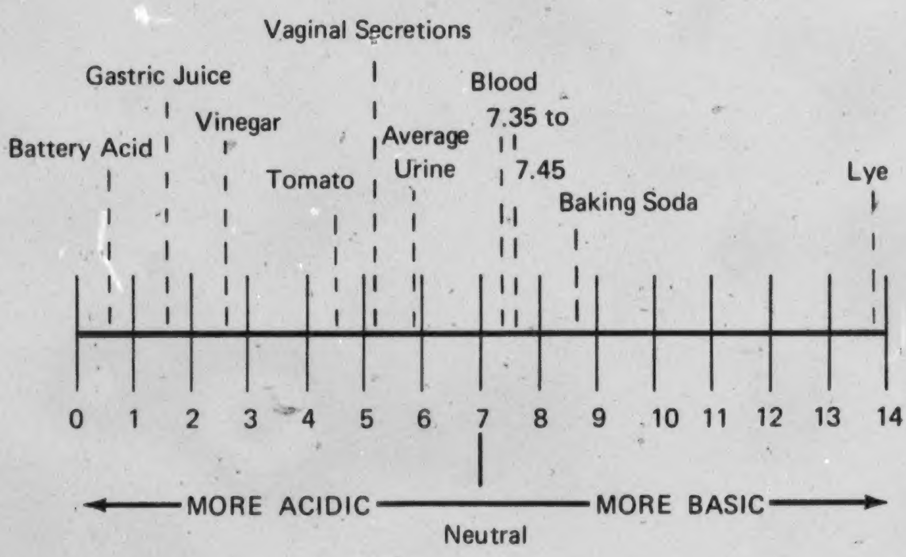
C. Cause certain dyes to undergo a color change

IX. pH scale (Transparency 2 and Assignment Sheet #1)

A. Gastric juice--1.5

B. Urine--5.8

C. Blood--7.35 to 7.45


Vaginal Secretions
Gastric Juice
Blood
7.35 to
7.45
Vinegar
Battery Acid
Average
Urine
Tomato
Lye
Baking Soda
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
MORE ACIDIC
MORE BASIC
Neutral

INFORMATION SHEET

X. Why human body needs mineral salts

- A. Needed in bones and teeth primarily as calcium and phosphorus
- B. Help to maintain acid-base balance
- C. Help to maintain fluid balance
- D. Body fluids produce needed salts (electrolytes) that break into ionized particles to be used in various body functions

Examples:

Positive charges	Negative charges
Sodium Na^+	Chloride Cl^-
Potassium K^+	Bicarbonate HCO_3^-
Calcium Ca^{++}	Sulfate SO_4^-
Magnesium Mg^{++}	Phosphate PO_4^-

XI. Terms and definitions associated with basic concepts of life sciences

- A. Biology–Study of life
- B. Anatomy--Study of structure
- C. Physiology--Study of function
- D. Microbiology--Study of minute living organisms
- E. Protoplasm--Living material in all cells
- F. Enzyme--Organic catalyst produced by living cells
- G. Catalyst--Substance which increases the rate of a chemical reaction without being permanently altered itself
- H. Cytology--Study of cells
- I. Histology--Study of the microscopic structure of tissues
- J. Homeostasis--State of chemical balance between the cell and its environment
- K. Phagocytosis--Ingestion and digestion of a particular substance, such as bacteria or dust, by a cell
- L. Molecule--Smallest unit into which a substance may be divided without losing its characteristics

INFORMATION SHEET

- M. Visceral--Pertaining to the internal organs
- N. Metabolism--Sum total of the physical and chemical processes and reactions taking place within an organism
- O. Conductivity--Ability to convey an impulse
- P. Contractility--Ability to change form or shape
- Q. Irritability--Ability to respond to a stimulus
- R. Adaptability--Ability to adjust, to a limited extent, to changes in the environment

XII. Catabolism and anabolism as parts of metabolism

- A. Catabolism--Complex compounds are changed into simpler ones with the release of energy
- B. Anabolism--Simple compounds are changed into more complex ones with the use of energy

XIII. Compounds in protoplasm and their functions

- A. Water--Acts as the liquid in all cell chemistry
- B. Proteins--Form the structural framework
- C. Carbohydrates--Provide energy
- D. Fats--Provide energy
- E. Nucleic acids--Control growth and reproduction
- F. Mineral salts--Act as buffers in acid-base balance, maintain fluid and electrolyte balance, and aid in structure of the body

XIV. Characteristics of protoplasm

- A. Organization
- B. Growth
- C. Reproduction
- D. Adaptability
- E. Irritability
- F. Contractility
- G. Excretion

INFORMATION SHEET

H. Secretion

I. Conductivity

J. Metabolism

XV. Functions of enzymes

(NOTE: There are over 650 known enzymes.)

A. Act as a catalyst in cells to speed chemical reactions

B. Break food down in the digestive tract into simpler forms that can be used by the cells

C. Act only upon a certain substance or group of closely related substances

Examples: Ptyalin (mouth) acts upon starches; rennin (stomach) acts upon milk protein; pepsin (stomach) acts upon protein; lipase (small intestine) acts upon fats; erepsin (small intestine) acts upon simple proteins

XVI. Basic parts of a cell (Transparency 3)

(NOTE: The human is made up of many cells. These cells form into organs that, grouped together, form systems. The body is composed of 40 percent solids and 60 percent liquids. Other parts of the cell are listed on Transparency 3 for reference.)

A. Mitochondria

B. Centrosome

C. Nucleus

D. Chromatin material

E. Cytoplasm

XVII. Components of a cell

A. Cell membrane--Outer wall; holds the cell together

B. Cytoplasm--Colorless, transparent substance containing dissolved salts and food substances

C. Nucleus--Control center containing chromatin and DNA

D. Mitochondria--Areas that carry on chemical reactions and produce energy

INFORMATION SHEET

E. Chromatin granules or material--Part of the nucleus which regulates cell production and growth

F. Centrosome--Region near the nucleus that contains some DNA and aids in cell division

(NOTE: DNA is deoxyribonucleic acid, a protein, and is considered to be the chemical basis of heredity and the carrier for genetic information.)

G. Chromosome--Body in the nuclear material that determines heredity

XVIII. Mitosis of a cell

A. Process by which cells divide and reproduce themselves to produce higher forms of life

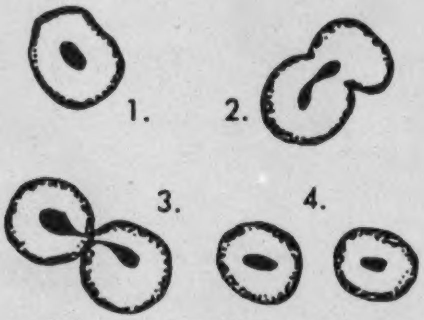
B. Most cells go through mitosis but some cells do not divide and reproduce after birth

Examples: Nerve cells, sperm, and ova

C. Important process to know because various functions depend on this reproduction of cells

(NOTE: Growth and repair of tissues takes place by mitosis. Unfortunately, tumor growths also take place by mitosis.)

Example of cell division (mitosis):



Used with permission of Technicourse from *Life Sciences for Nursing and Health Technologies*, 3rd ed., by Virginia Thomas, copyright 1977.

XIX. Types of movement of material through cell membrane

A. Physiologic/active transport--Requires energy from the cell or wraps itself around a foreign particle

Example: Phagocytosis

B. Physical/passive transport--Requires no energy from the cell; moves through solution methods of movement

INFORMATION SHEET

XX. Types of passive transport movement (Transparency 4 and Assignment Sheet #2)

A. Diffusion--Particles move to equalize concentration throughout

Example: Dispersion of carbon dioxide and oxygen to areas of lesser concentration through the membrane of the lung

B. Filtration--Particles move through a filter or membrane that prevents passage of certain molecules

Example: The spleen filters the blood, removing wastes, old red cells, and foreign substances

C. Osmosis--Solvent molecules pass through a semi-permeable membrane to equalize concentration on each side

(NOTE: A semi-permeable membrane is one that will allow fluids through, but not solid particles.)

Example: When there is an increase in the amount of salt in tissue fluid, water moves into the tissues to lower the salt concentration

XXI. Isotonic, hypotonic, and hypertonic solutions (Transparency 5)

A. Isotonic solution--Has the same concentration of dissolved particles as the solution with which it is compared

(NOTE: This solution is also known as physiological or normal solution.)

Example: Red blood cells normally exist in a 0.9 percent salt solution with the same concentration of salt in the outside solution

B. Hypotonic solution--Condition in which a solution contains a lesser concentration of dissolved particles than the solution to which it is compared

Example: If the solution outside the cell contains a lower content of salt than normal, osmosis takes place and water flows into the cell. This makes the cell swell and can cause rupture

C. Hypertonic solution--Condition in which a solution contains a greater concentration of dissolved particles than the solution with which it is compared

Example: If the solution outside the cell contains a higher content of salt, then osmosis takes place and water flows out of the cell, causing it to shrink and be destroyed

(NOTE: Hypotonic and hypertonic solutions are known as non-physiological solutions.)

INFORMATION SHEET

XXII. Epithelial and connective tissue (Transparencies 6, 7, and 8)

A. Epithelial

1. Has cells that are close together
2. Covers surfaces inside and outside the body
3. Protects other tissues; aids in secretion and excretion

Examples: Skin, nails, blood vessels, lining of body cavities

B. Connective

1. Has many varieties
2. May be thin and fragile or tough and strong
3. Protects, supports, and binds the body together

Examples: Fatty tissue, ligaments, tendons

XXIII. Types of muscle tissue (Transparencies 9, 10, and 11)

A. Voluntary skeletal muscles that move the body

Example: External muscles and those that move the eyeball and tongue

B. Involuntary visceral muscles that control internal functions

Example: Digestive muscles

C. Cardiac involuntary muscles

Example: Heart muscles

XXIV. Nerve tissue (Transparency 12)

A. Highly specialized cells that conduct impulses throughout the body

B. Found in the brain, spinal cord, and nerve endings all over the body

C. Nerve cells can be completely destroyed if the cell body has been injured

XXV. Types of membranes

A. Mucous membranes--Secrete mucus and protect the walls of passageways that open to the outside of the body

Examples: Digestive and respiratory tracts

INFORMATION SHEET

B. Serous membranes--Secrete serous fluids which lubricate surfaces of inner organs

Examples: Pleura which line the chest cavity and cover the lungs

C. Cutaneous membranes--Cover and protect the body

XXVI. Terms associated with points of reference on the body

A. Anatomical position--Body standing erect with arms at sides and palms facing forward

B. Thorax--Chest

C. Abdomen--Portion of body between thorax and pelvis

D. Pelvis--Lowest part of trunk

E. Cranium--Skeleton of the head

F. Retroperitoneal--Behind the peritoneum

G. Peritoneum--Serous membrane that lies over the viscera and lining of the abdominal cavity

H. Viscera--Internal organs enclosed within a cavity, especially the abdominal organs

I. Plane--Specified level either horizontal or vertical

XXVII. Body cavities (Transparency 13)

A. Dorsal

1. Cranial cavity

2. Spinal cavity

(NOTE: The spinal column is protected by a boney structure known as the vertebrae.)

B. Ventral

1. Thoracic cavity

(NOTE: The thoracic cavity is divided by the diaphragm, a strong muscle that assists in breathing.)

2. Abdominal cavity

3. Pelvic cavity

INFORMATION SHEET

XXVIII. Abdominopelvic regions of the body (Transparency 14)

(NOTE: The abdominopelvic area is usually divided into quadrants. The quadrants are referred to as upper right, upper left, lower right, and lower left. More specific areas are noted below.)

A. Right hypochondrium

B. Epigastrium

C. Left hypochondrium

D. Right lumbar

E. Umbilical

F. Left lumbar

G. Right inguinal

H. Suprapubic

I. Left inguinal

(NOTE: The areas are named according to which organs or structures belong in that area of the body.)

XXIX. Directional terms (Transparencies 15 and 16)

A. Medial--Near the midline

B. Lateral--Toward the side

C. Posterior--Toward the back

D. Anterior--Toward the front

E. Superior--Above

F. Inferior--Below

G. Central--Pertaining to the center

H. Peripheral--Pertaining to the outward part

I. Cranial--Near the head

J. Caudal--Near the lower end of the spine

K. Proximal--Nearest the origin of the structure

L. Distal--Farthest from the origin of the structure

INFORMATION SHEET

XXX. Anatomical planes (Transparency 17)

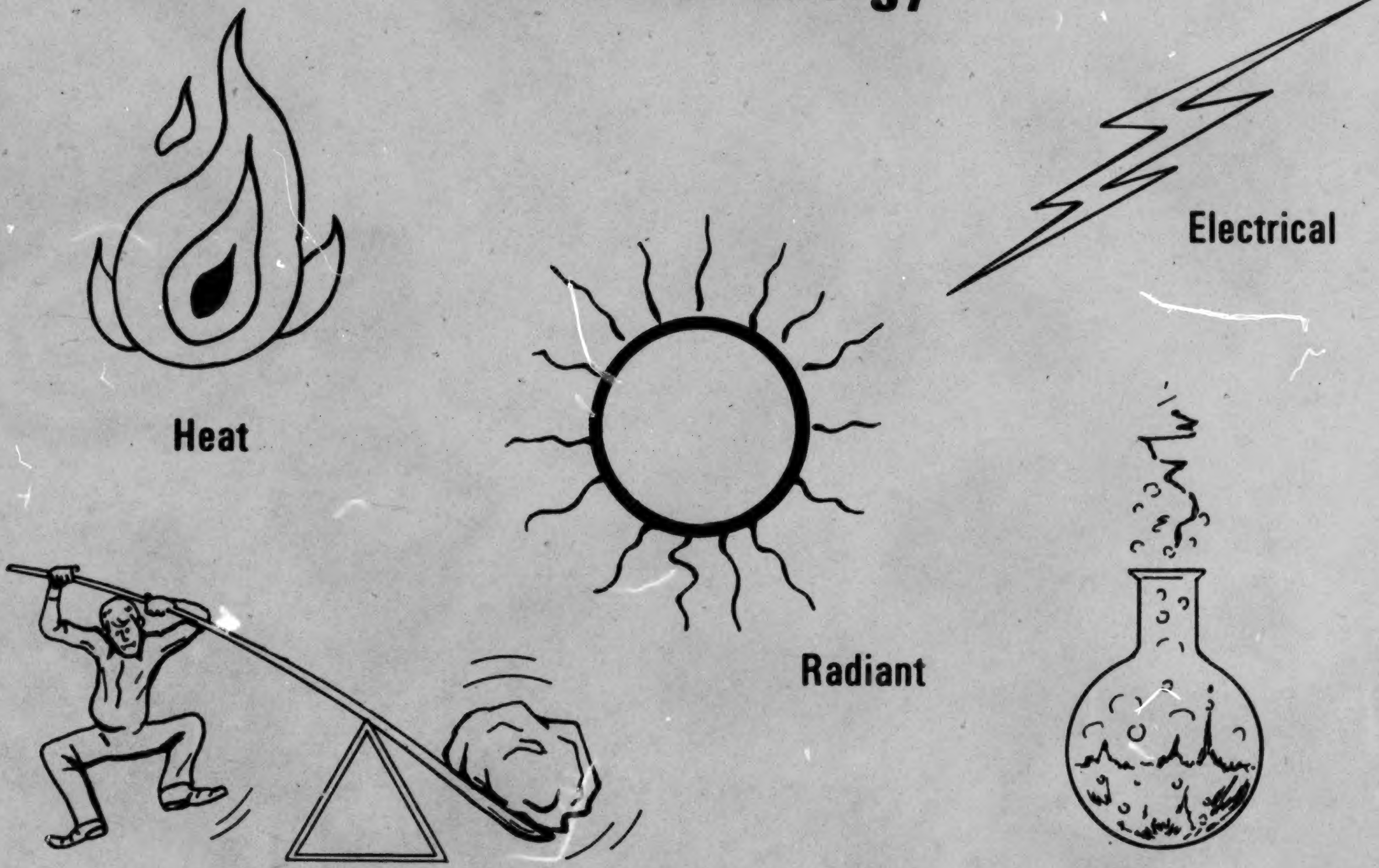
A. Sagittal--Imaginary line from head to foot, dividing the body into right and left parts

B. Frontal or coronal--Divides the body into anterior or ventral and posterior or dorsal parts

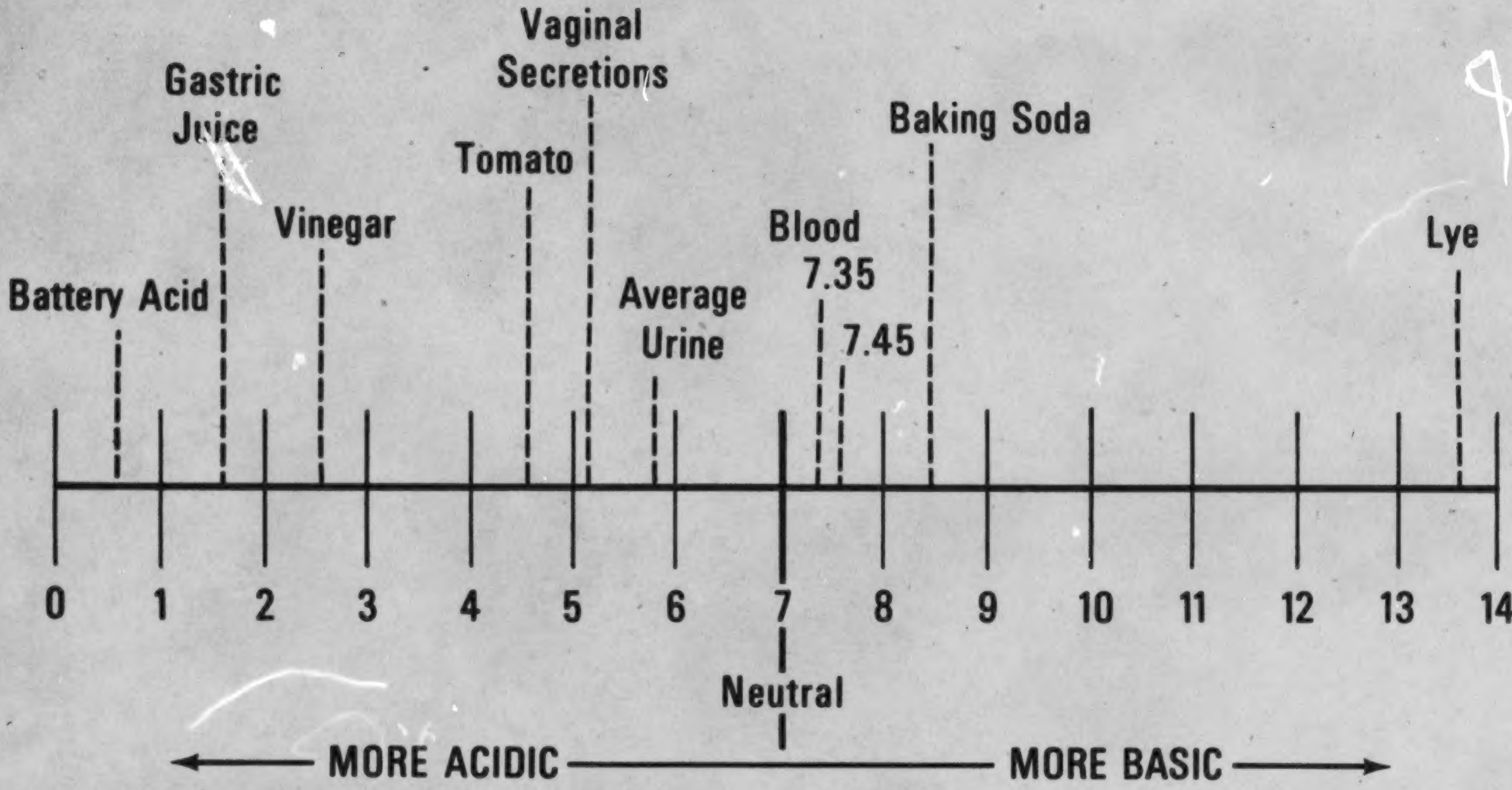
C. Transverse--Divides the body into superior and inferior parts

(NOTE: Transverse lines can be located at any level on the body.)

Forms of Energy


Heat
Electrical
Radiant
Mechanical
Chemical

pH Scale

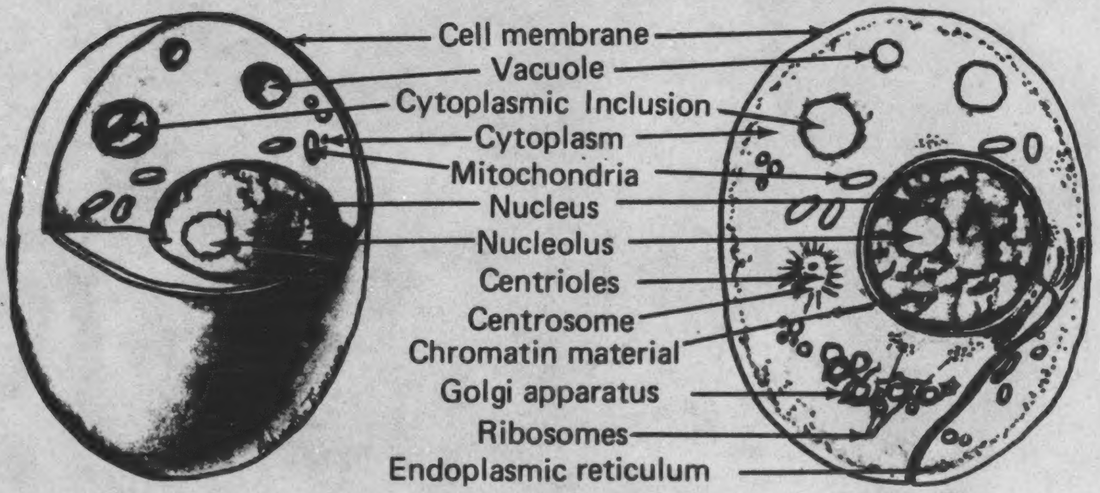

Vaginal Secretions
Gastric Juice
Baking Soda
Tomato
Vinegar
Blood
7.35
7.45
Lye
Battery Acid
Average Urine
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Neutral
MORE ACIDIC
MORE BASIC

TM 2

418

PN I - 23-C

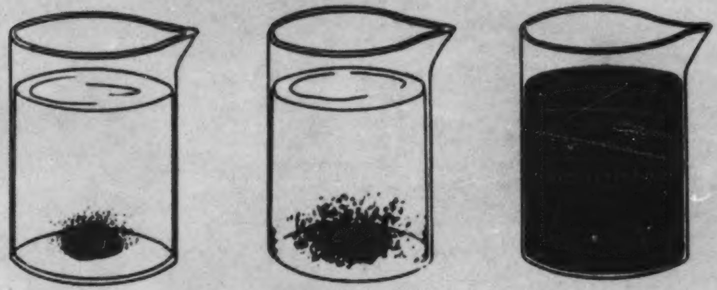
Basic Parts of a Cell


Cell membrane
Vacuole
Cytoplasmic Inclusion
Cytoplasm
Mitochondria
Nucleus
Nucleolus
Centrioles
Centrosome
Chromatin material
Golgi apparatus
Ribosomes
Endoplasmic reticulum

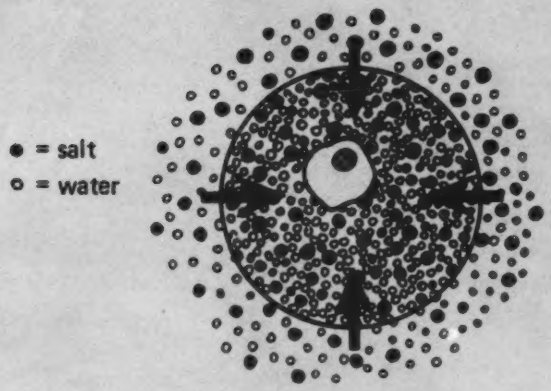
Used with permission of W.B. Saunders Company from *Structure and Function in Man*, 4th ed., by Stanley W. Jacob, Clarice A. Francone, and Walter J. Lossow, copyright 1978.

Physical/Passive Transport Methods of Cells

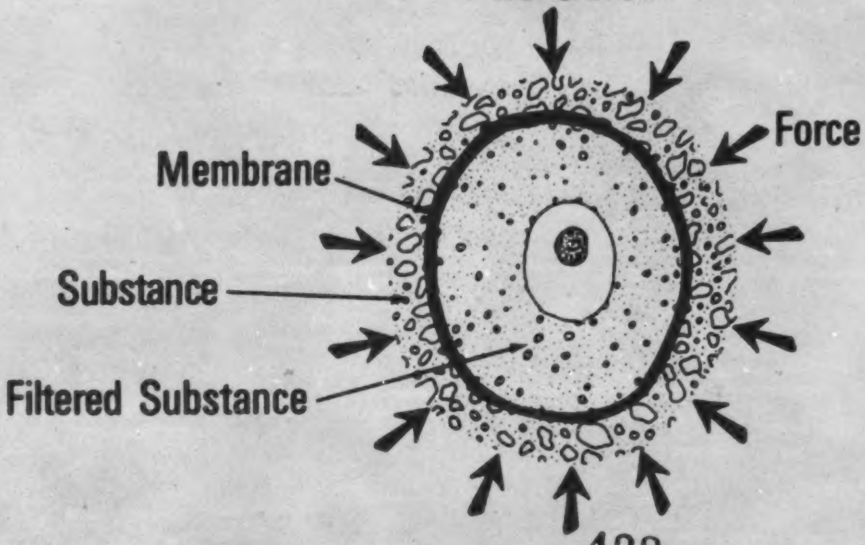
Diffusion



Osmosis

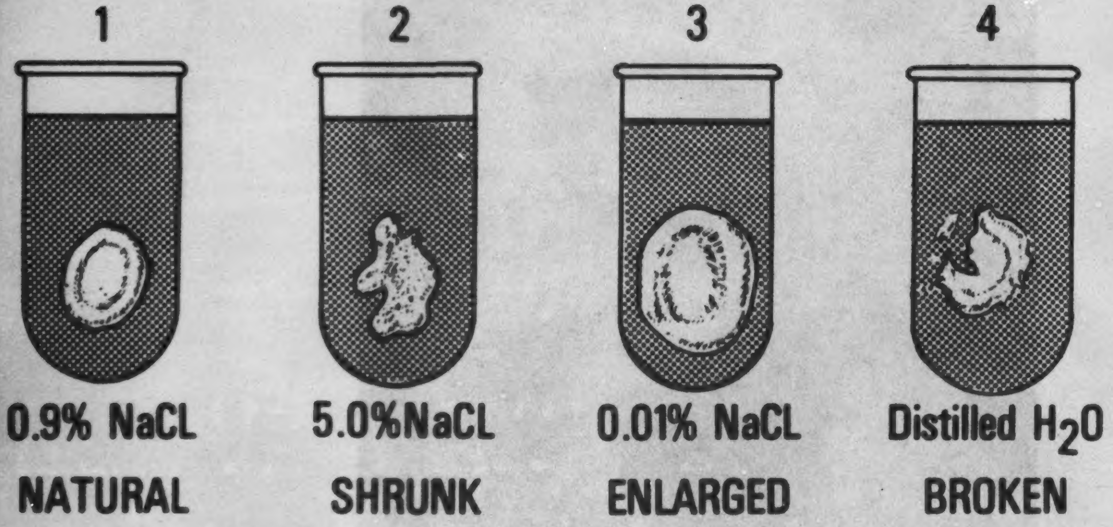


Filtration


Force
Membrane
Substance
Filtered Substance

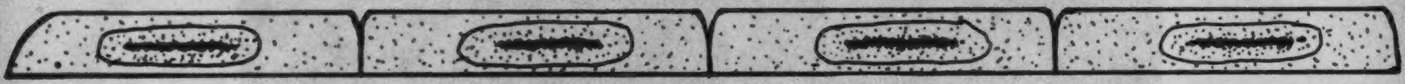
Solutions

1 Isotonic Solution
2 Hypertonic Solution
3 and 4 Hypotonic Solutions

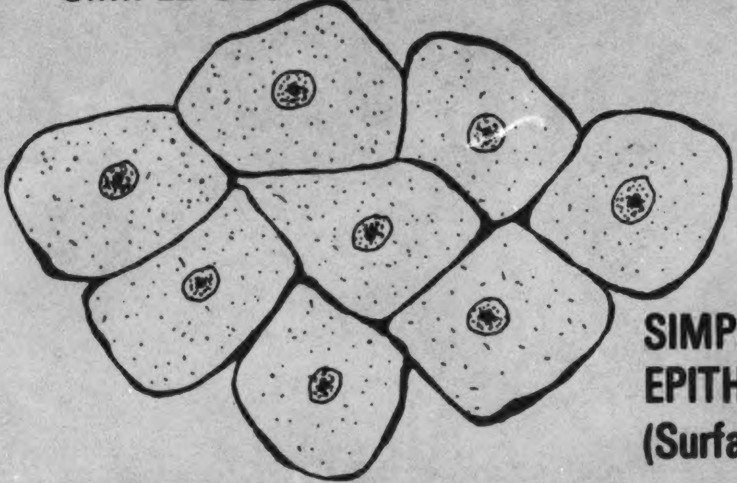

1
2
3
4
0.9% NaCL
NATURAL
5.0%NaCL
SHRUNK
0.01% NaCL
ENLARGED
Distilled H_2O
BROKEN

Effect of Osmotic Pressure on Red Blood Cells

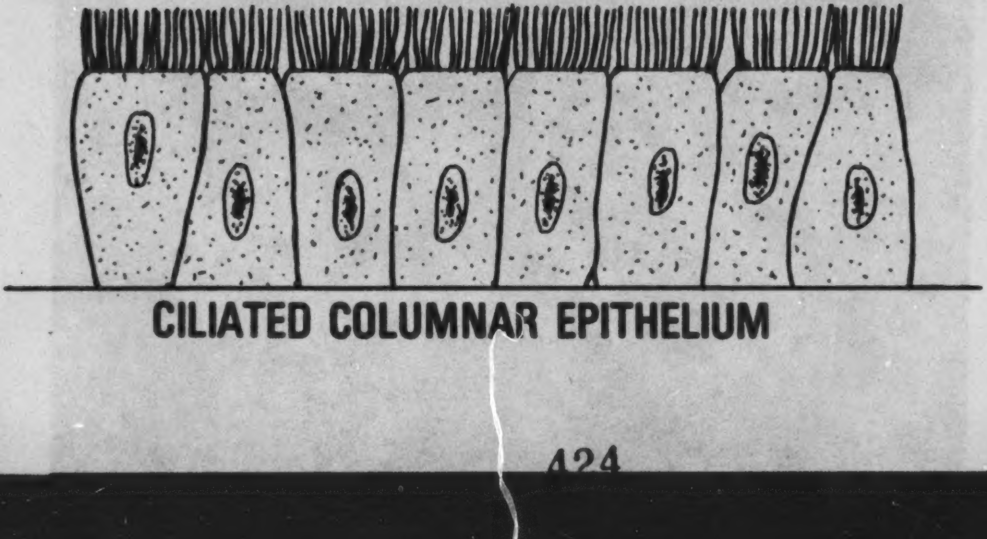
Epithelial Tissues



SIMPLE SQUAMOUS EPITHELIUM

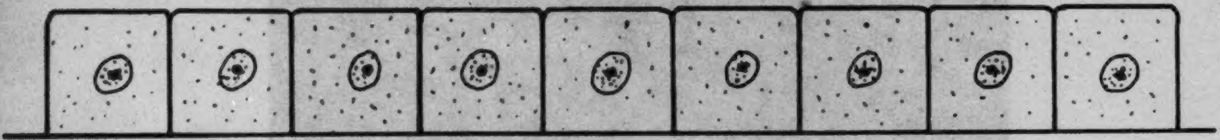


SIMPLE SQUAMOUS EPITHELIUM (Surface View)

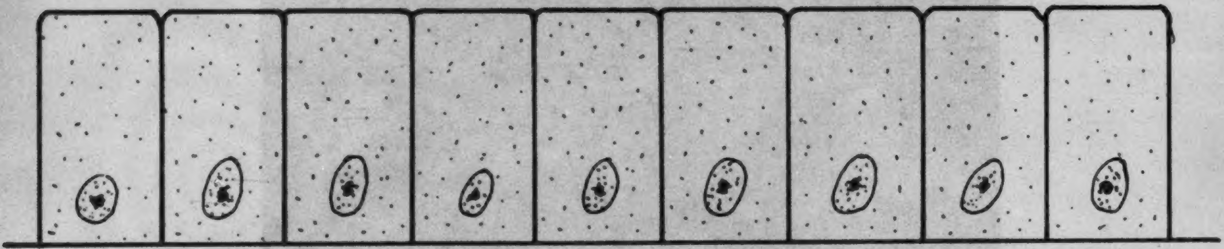


CILIATED COLUMNAR EPITHELIUM

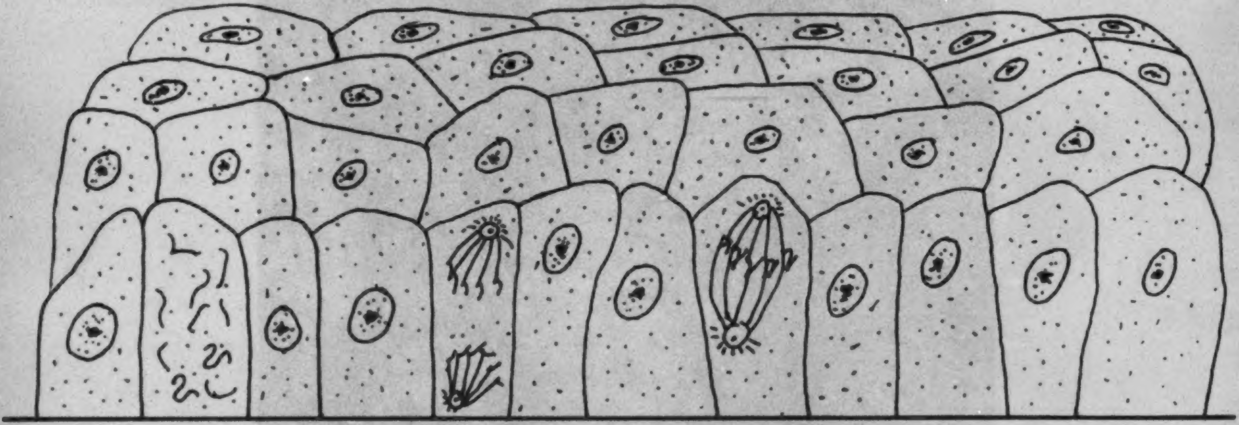
Epithelial Tissues
(Continued)



SIMPLE CUBOIDAL EPITHELIUM

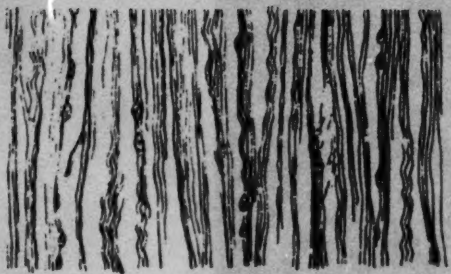


SIMPLE COLUMNAR EPITHELIUM

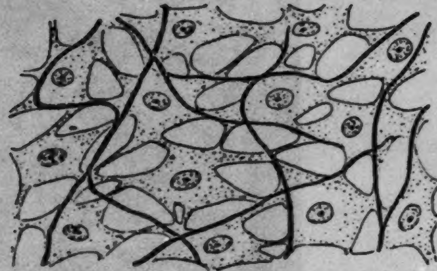


STRATIFIED SQUAMOUS EPITHELIUM

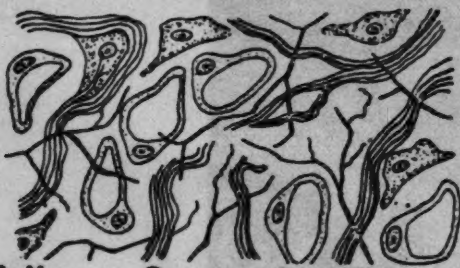
Connective Tissues



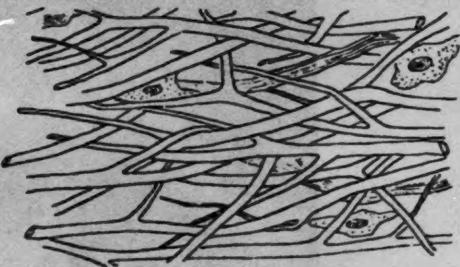
Fibrous Connective Tissue



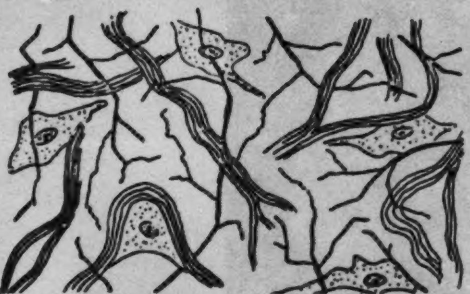
Reticular Connective Tissue



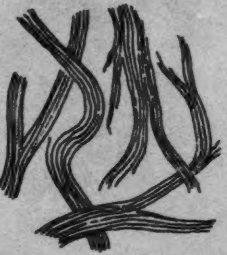
Adipose Connective Tissue



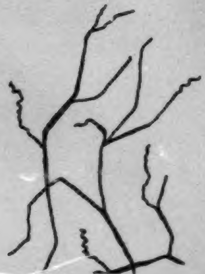
Elastic Connective Tissue



Areolar Connective Tissue

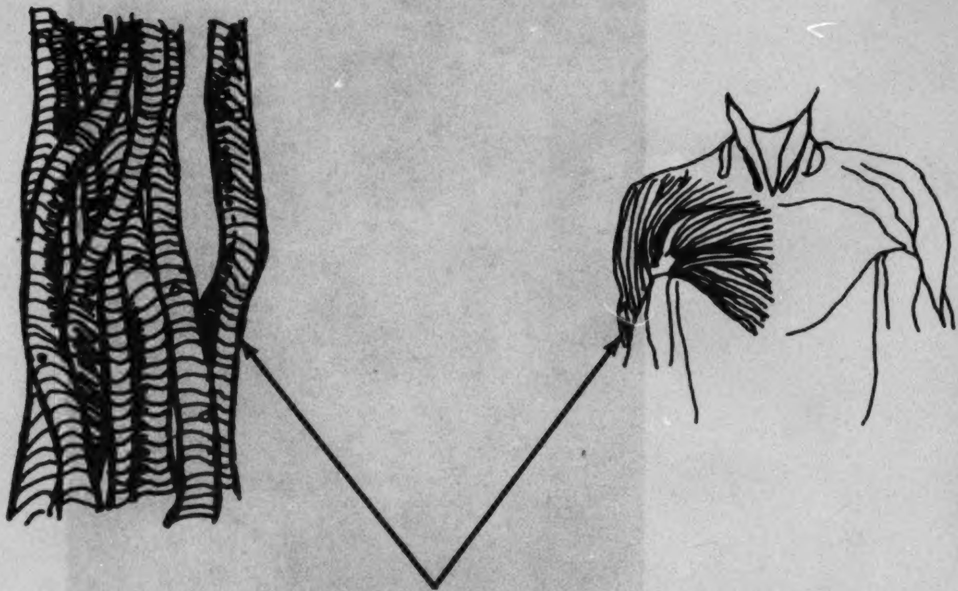


Collagenous Fibers



Elastic Fibers

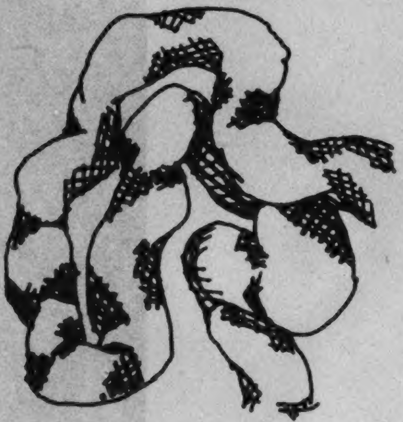
Voluntary Muscle



Skeletal Muscle Tissue

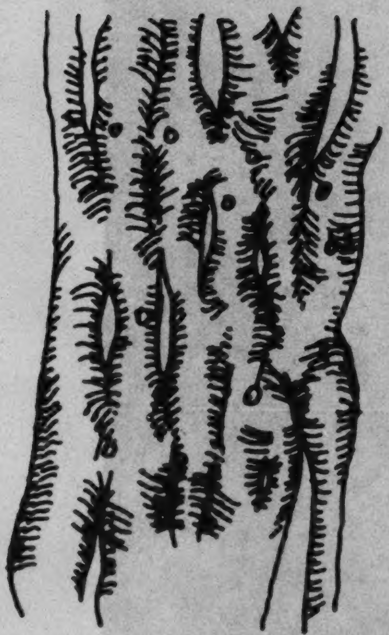
Involuntary Muscle

Visceral Muscle Tissue

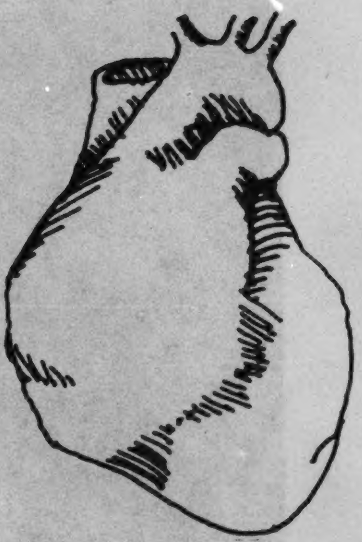


Small Intestine

Cardiac Muscle

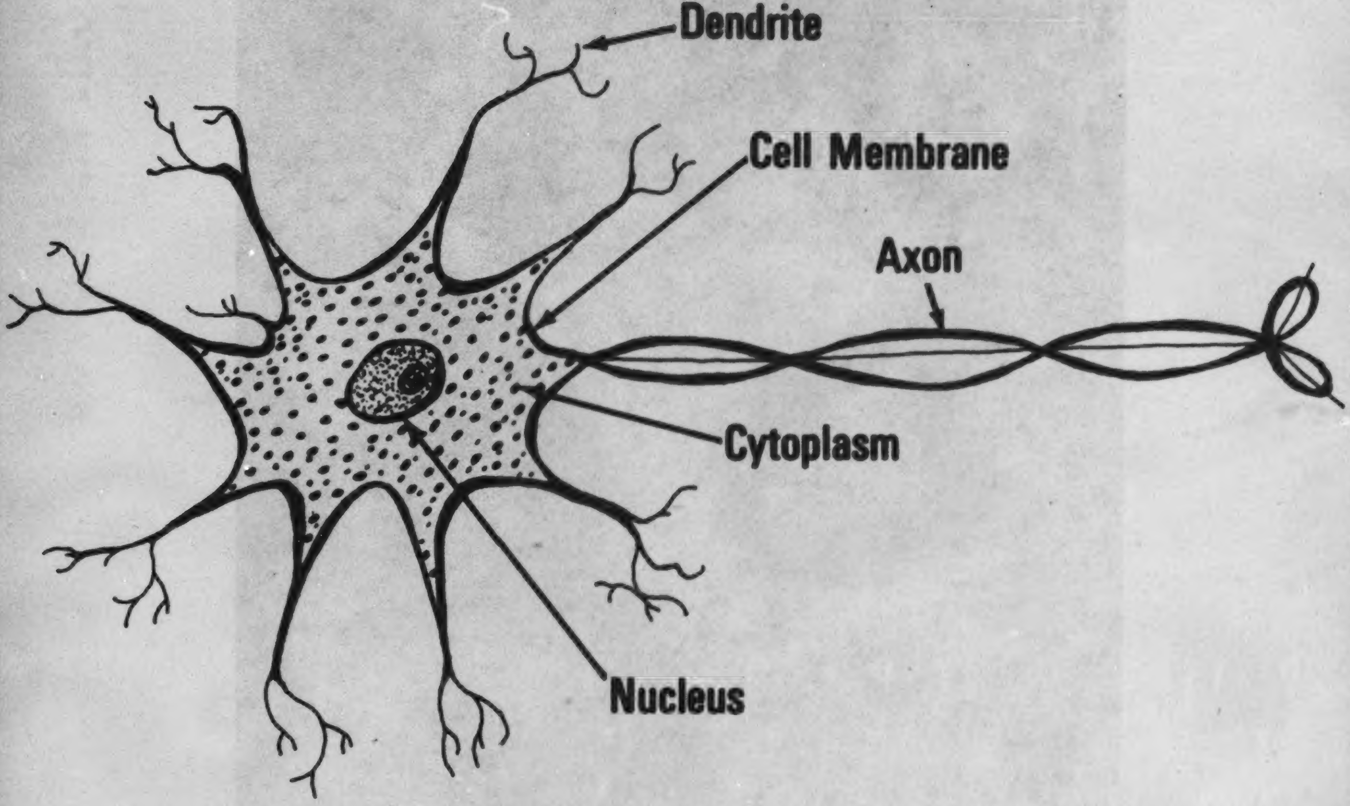


Cardiac Muscle Tissue

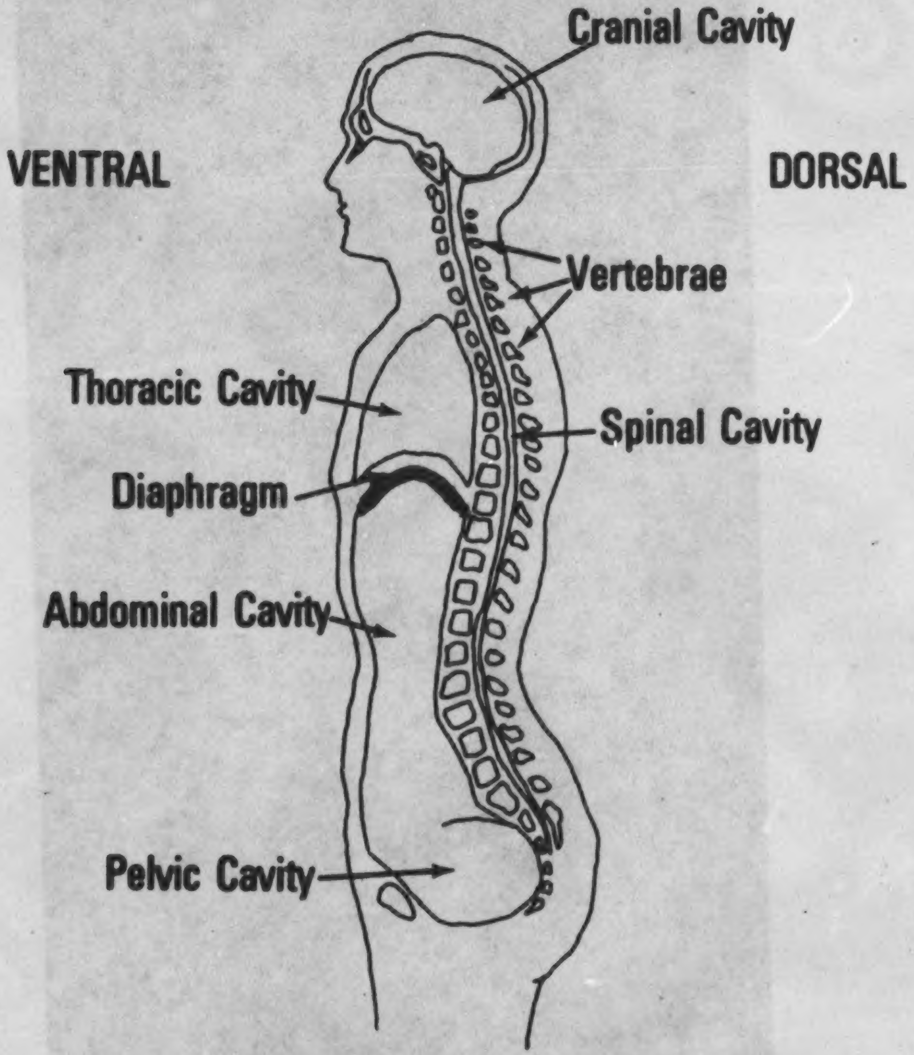


The Heart

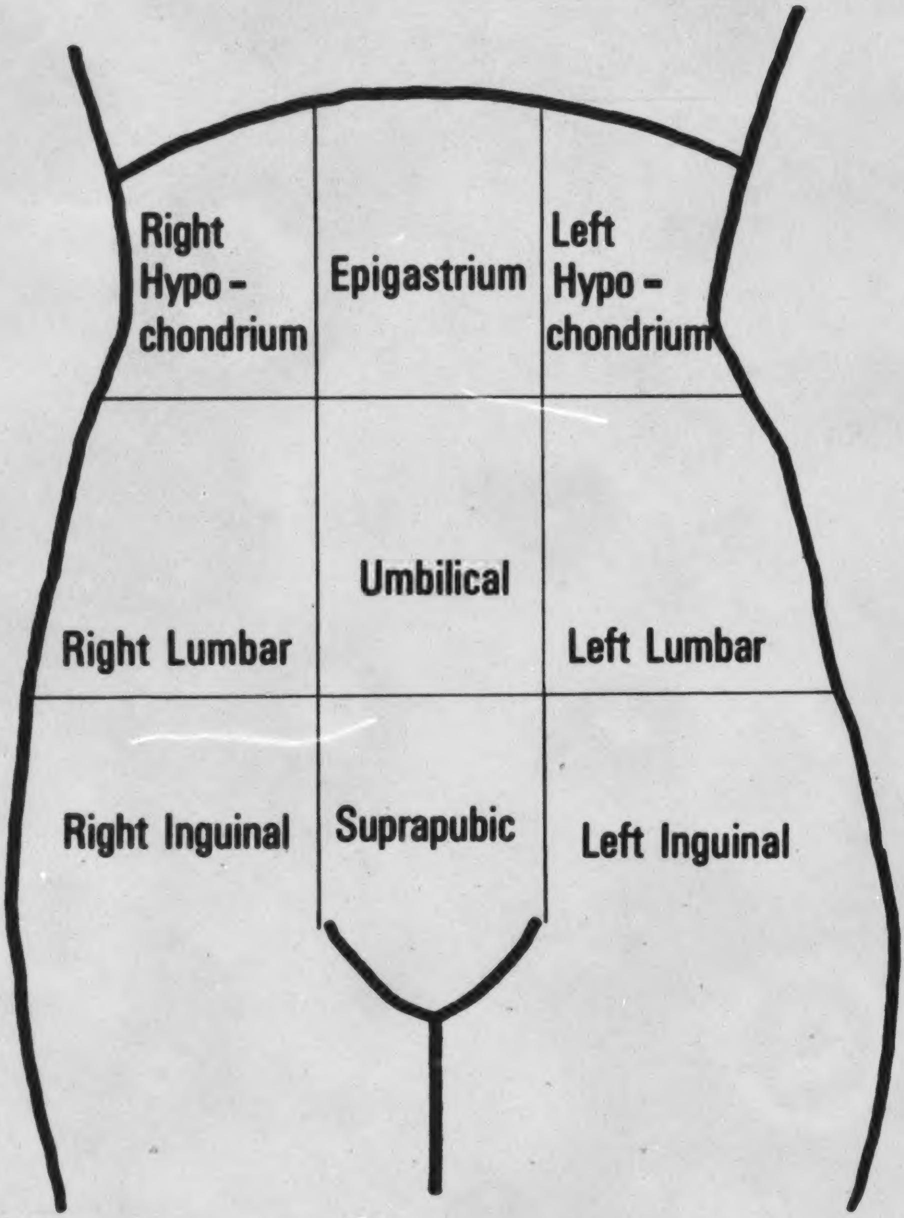
Nerve Cell


Dendrite
Cell Membrane
Axon
Cytoplasm
Nucleus

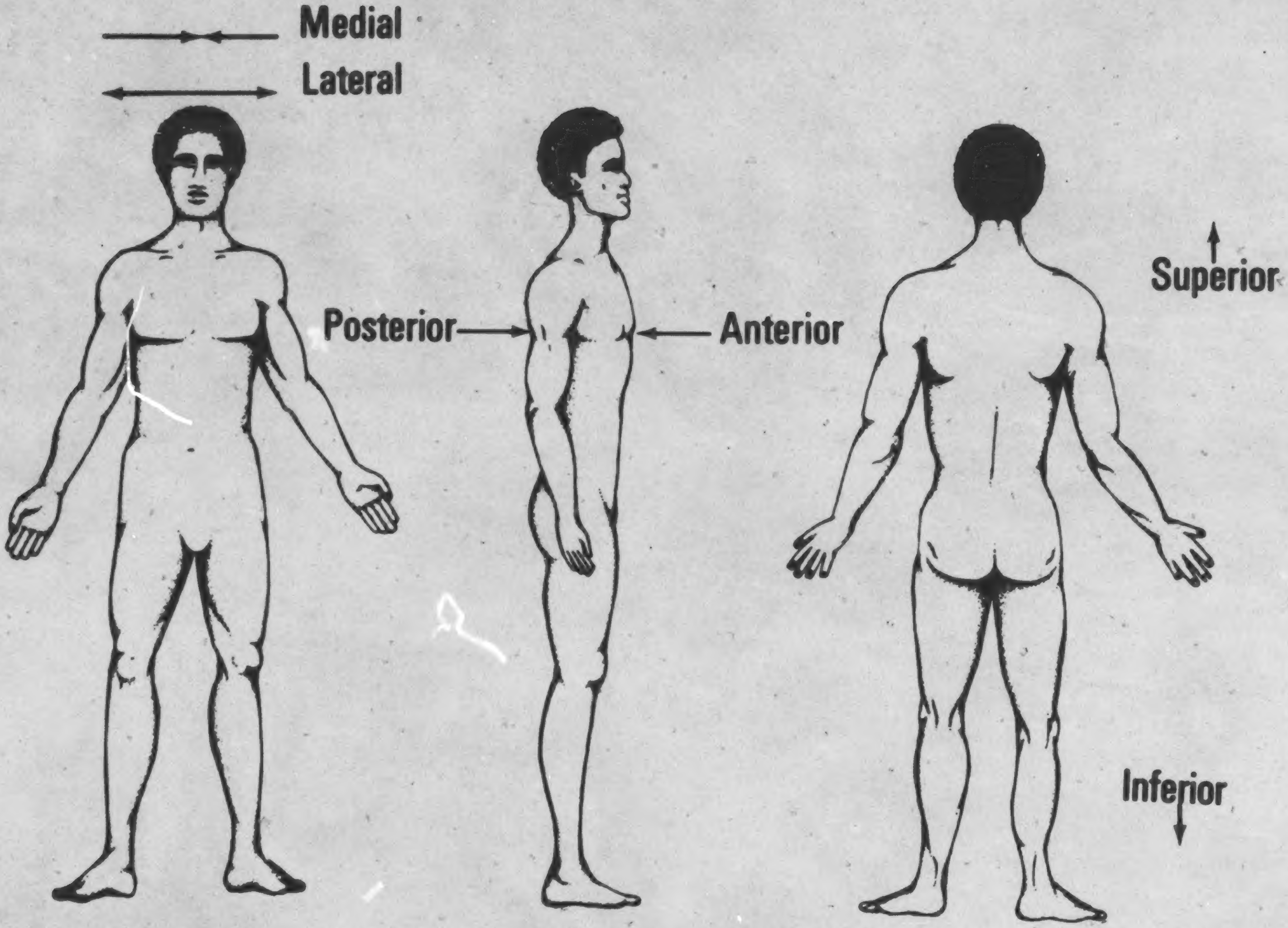
Body Cavities: Side View


Cranial Cavity
VENTRAL
DORSAL
Vertebrae
Thoracic Cavity
Spinal Cavity
Diaphragm
Abdominal Cavity
Pelvic Cavity

Regions of the Abdominopelvic Area

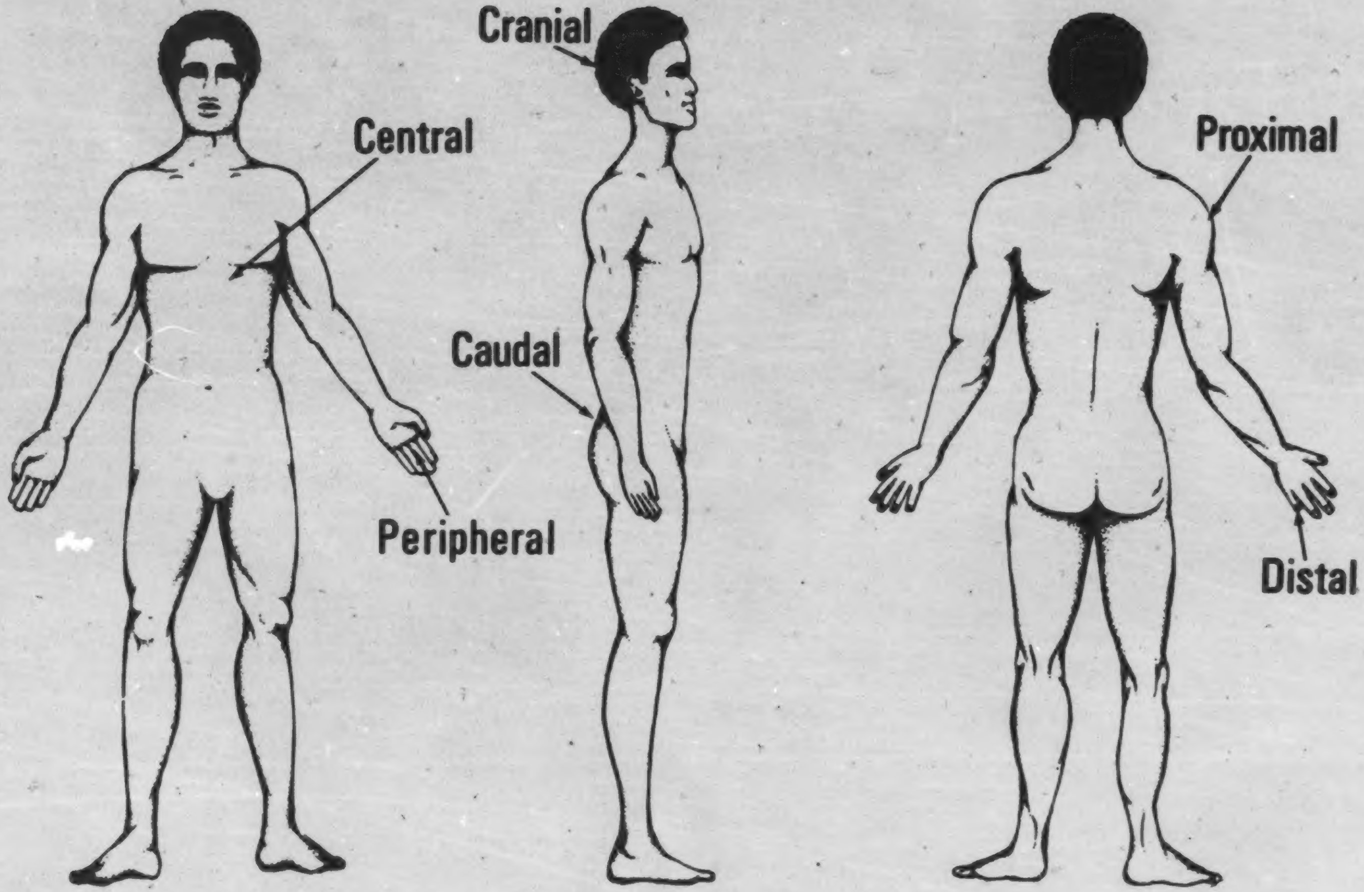

Right Hypo - chondrium
Epigastrium
Left Hypo - chondrium
Umbilical
Right Lumbar
Left Lumbar
Right Inguinal
Suprapubic
Left Inguinal

Directions

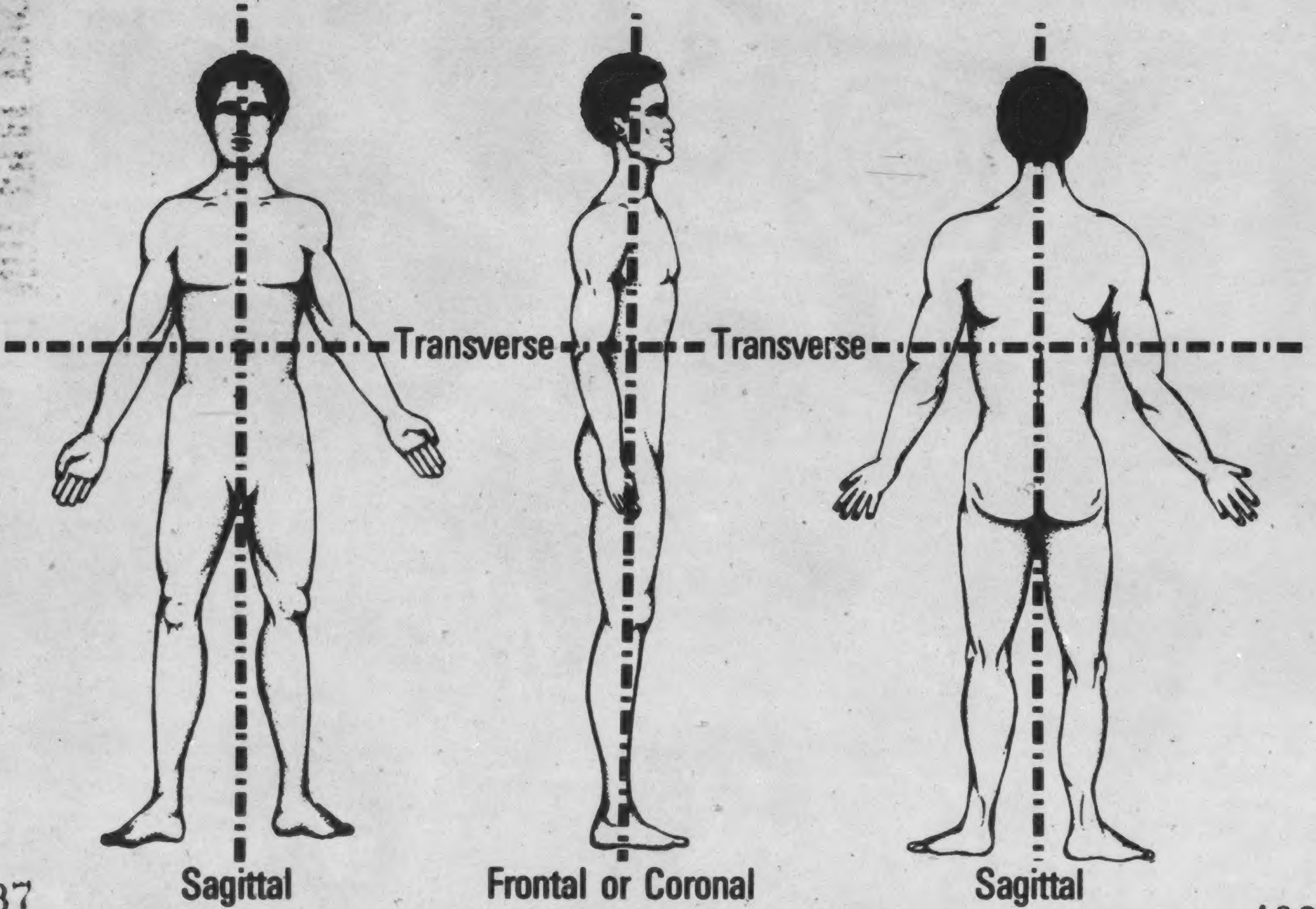

Medial
Lateral
Posterior
Anterior
Superior
Inferior

Directions

(Continued)


Cranial
Central
Proximal
Caudal
Peripheral
Distal

Planes


Transverse
Transverse
Sagittal
Frontal or Coronal
Sagittal

BASIC CONCEPTS OF PHYSICAL
AND LIFE SCIENCES
UNIT I

ASSIGNMENT SHEET #1--CLASSIFY THE pH OF SOLUTIONS

NAME__________________________________ SCORE_______________

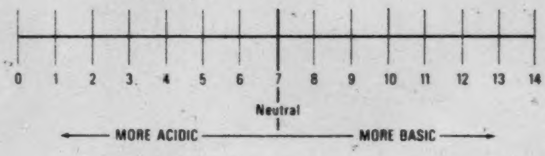
Knowledge of acidic and basic substances is very important in the health field. To remain healthy, people must maintain a good balance of acids and bases in their bodies.

Using the litmus paper and instructions given by the instructor, test different solutions to find their pH. Suggestions for solutions to use include tomato juice, vinegar, household cleansers, shampoos, baking soda, blood, and urine.

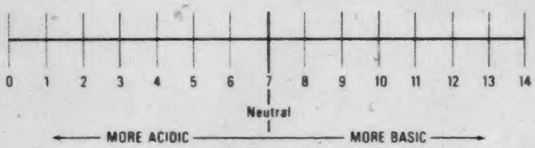
Classify the pH of solutions using the scale provided.

SOLUTION

1. ____________________________


0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Neutral
MORE ACIDIC
MORE BASIC

2. ____________________________


0
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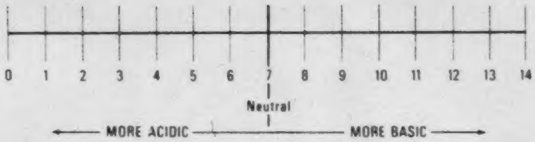
11
12
13
14
Neutral
MORE ACIDIC
MORE BASIC

3. ____________________________


0
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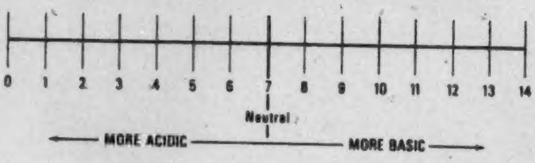
11
12
13
14
Neutral
MORE ACIDIC
MORE BASIC

ASSIGNMENT SHEET #1

4. ______________________


0
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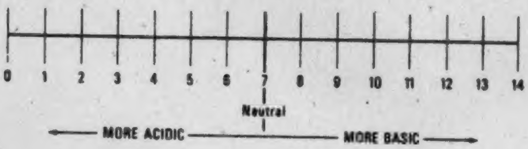
14
Neutral
MORE ACIDIC
MORE BASIC

5. ______________________


0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Neutral
MORE ACIDIC
MORE BASIC

BASIC CONCEPTS OF PHYSICAL
AND LIFE SCIENCES
UNIT I

ASSIGNMENT SHEET #2--DEMONSTRATE THE TRANSPORT MOVEMENTS OF MATERIALS

NAME ______________________ SCORE __________

The physiologic/active and physical/passive transport movement of liquids and solids is a constant process throughout the body within each cell. To understand how these materials move is important to the nurse as he or she assesses patient's homeostasis. The experiments below will help you to understand each transport method. Your instructor will provide you with the necessary equipment. Answer the questions following each experiment.

1. Fill a glass partially full of water. Use a rubber band to fasten a piece of dialysis tubing or animal membrane over the bottom of a funnel. Pour brown table syrup into the funnel. Set the funnel in the glass. The bottom of the funnel should be below the level of the water. Observe the two solutions. What happened to them? Why? What is this movement called?

____

____

____

2. Drop a tablet of dye, such as Easter egg dye, in one glass of water and a drop of food coloring in another glass of water. Which glass of water became evenly colored in the shortest length of time? Why? What is this movement called?

____

____

____

3. Prepare a mixture of dirt in water. Line a strainer, such as a tea strainer, with a piece of tissue or paper towel. Pour the dirt and water mixture through the lined strainer. What happened? Is the water clear or cloudy after it passes through the tissue? Why? What is this movement called?

____

____

____

BASIC CONCEPTS OF PHYSICAL
AND LIFE SCIENCES
UNIT I

ANSWERS TO ASSIGNMENT SHEET #2

1. Water will pass through the tubing or membrane into the funnel to equalize the concentration on each side; osmosis

2. The food coloring (liquid) will move throughout the water more quickly than the solid tablet will dissolve because the liquid is in a solvent state; diffusion

3. The water will run through the tissue, leaving the dirt in the tissue. If the water is cloudy, it indicates either that some particles of the dirt dissolved and were able to pass through the tissue or the spaces in the tissue were too large and the smaller particles were able to pass through; filtration

PN I - 61-C

BASIC CONCEPTS OF PHYSICAL
AND LIFE SCIENCES
UNIT I

TEST

NAME ______________________________ SCORE ______________

1. Match terms associated with basic concepts of physical science to the correct definitions. Write the correct numbers in the blank.

______a. That which produces change or results from change; the ability or power to do work

______b. Unit used in the measurement of heat energy and the energy values of food

______c. Science dealing with matter and energy and their interactions

______d. Pressure a liquid exerts as a result of its own weight

______e. Liquid part of the blood

______f. Hydrogen ion concentration of a solution; the degree to which a solution is acidic or basic

______g. Physical material having form and weight; anything that occupies space and has weight

______h. Substance that yields hydrogen ions in solution

______i. Science which deals with the composition of substances and the changes they undergo

______j. Compounds formed from the reaction of an acid with a base

______k. Atom or group of atoms carrying an electric charge

______l. Strain, stress, or tension due to compression, expansion, pull, or thrust

1. Matter
2. Plasma
3. Pressure
4. Energy
5. Acid
6. Hydrostatic pressure
7. pH
8. Ion
9. Mineral salts
10. Calorie
11. Chemistry
12. Physics

______m. Liquid containing dissolved solids called *solutes*

______n. Relative content or strength of an ingredient

______o. Any compound, when dissolved in water, that separates into charged particles (ions) capable of conducting an electrical current

______p. Substance that yields hydroxyl ions in solution

______q. Position, arrangement, or frequency of occurence

13. Distribution
14. Concentration
15. Solution
16. Electrolyte
17. Base

2. Distinguish between states of matter. Write an "S" for solid, "L" for liquid, or "G" for gas in the correct blanks.

______a. Has a definite volume and weight but assumes the shape of the container in which it is placed

______b. Has a definite shape, volume, and weight

______c. Has a definite weight but indefinite shape and volume

3. State rules of nature governing the activities of solutions.

a. ______________________________

b. ______________________________

c. ______________________________

4. Distinguish between the kinds of matter. Write an "E" for element, "C" for compound, or "M" for mixture in the correct blanks.

______a. Two or more elements or compounds which are not chemically combined

______b. Simple pure substance which cannot be decomposed by ordinary chemical reactions

______c. Two or more elements united in a fixed ratio

5. Describe physical and chemical changes.

a. Chemical change--______________________________

____

____

____

b. Physical change--________________________________

____

____

____

6. List forms of energy.

a. ________________________________

b. ________________________________

c. ________________________________

d. ________________________________

e. ________________________________

7. Distinguish between properties of acids and bases. Write an "A" for acids or "B" for bases in the correct blanks.

______a. Pungent odor

______b. Soapy or slippery feeling

______c. Bitter taste

______d. Sour taste

______e. pH above 7

______f. pH 7 or below

8. Describe common properties of acids and bases.

____

____

____

____

____

____

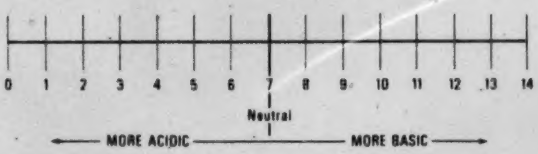
____

____

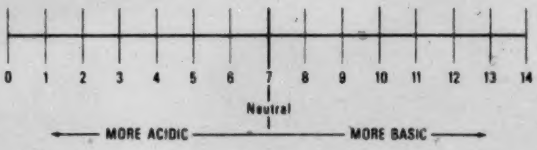
9. Identify the average normal concentration of gastric juice, urine, and blood when given a diagram of the pH scale. Correctly place the values on each of the scales.

SOLUTION

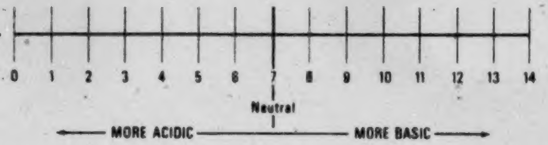
a. Gastric juice ______________________


0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
Neutral
MORE ACIDIC
MORE BASIC

b. Urine ______________________


0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
Neutral
MORE ACIDIC
MORE BASIC

c. Blood ______________________


0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
Neutral
MORE ACIDIC
MORE BASIC

10. Select from the list below reasons the human body needs mineral salts. Mark each correct answer with an "X."

_____a. Help to maintain fluid balance

_____b. Aid to increase appetite

_____c. Body fluids produce needed salts (electrolytes) that break into ionized particles to be used in various body functions

_____d. Needed in bones and teeth primarily as calcium and phosphorus

_____e. Aids in digestion

_____f. Lower blood pressure

_____g. Help to maintain acid-base balance

11. Match terms associated with basic concepts of life sciences to the correct definitions. Write the correct numbers in the blanks.

_____a. Ability to adjust, to a limited extent, to changes in the environment

_____b. Pertaining to the internal organs

_____c. Study of structure

_____d. Ability to change form or shape

_____e. Substance which increases the rate of a chemical reaction without being permanently altered itself

_____f. Living material in all cells

_____g. Ability to convey an impulse

_____h. Study of function

_____i. Sum total of the physical and chemical processes and reactions taking place within an organism

_____j. Study of cells

_____k. Ability to respond to a stimulus

_____l. Study of life

_____m. Smallest unit into which a substance may be divided without losing its characteristics

_____n. Study of the microscopic structure of tissues

_____o. Study of minute living organisms

_____p. Ingestion and digestion of a particular substance, such as bacteria or dust, by a cell

_____q. Organic catalyst produced by living cells

_____r. State of chemical balance between the cell and its environment

1. Biology
2. Anatomy
3. Physiology
4. Microbiology
5. Protoplasm
6. Enzyme
7. Catalyst
8. Cytology
9. Histology
10. Homeostasis
11. Phagocytosis
12. Molecule
13. Visceral
14. Metabolism
15. Conductivity
16. Contractility
17. Irritability
18. Adaptability

12. Distinguish between catabolism and anabolism as parts of metabolism. Write an "A" for anabolism and a "C" for catabolism in the correct blanks.

______a. Simple compounds are changed into more complex ones with the use of energy

______b. Complex compounds are changed into simpler ones with the release of energy

13. Match the compounds in protoplasm to their correct functions. Write the correct numbers in the blanks. A blank may have more than one correct answer.

______a. Control growth and reproduction

______b. Provide energy

______c. Act as buffers in acid-base balance, maintain fluid and electrolyte balance, and aid in structure of the body

______d. Acts as the liquid in all cell chemistry

______e. Form the structural framework

1. Water
2. Proteins
3. Carbohydrates
4. Fats
5. Nucleic acids
6. Mineral salts

14. Select from the list below characteristics of protoplasm. Mark each correct answer with an "X."

______a. Organization

______b. Instillation

______c. Defense

______d. Metabolism

______e. Secretion

______f. Growth

______g. Offense

______h. Contractility

______i. Distillation

______j. Conductivity

______k. Reproduction

______l. Pressure

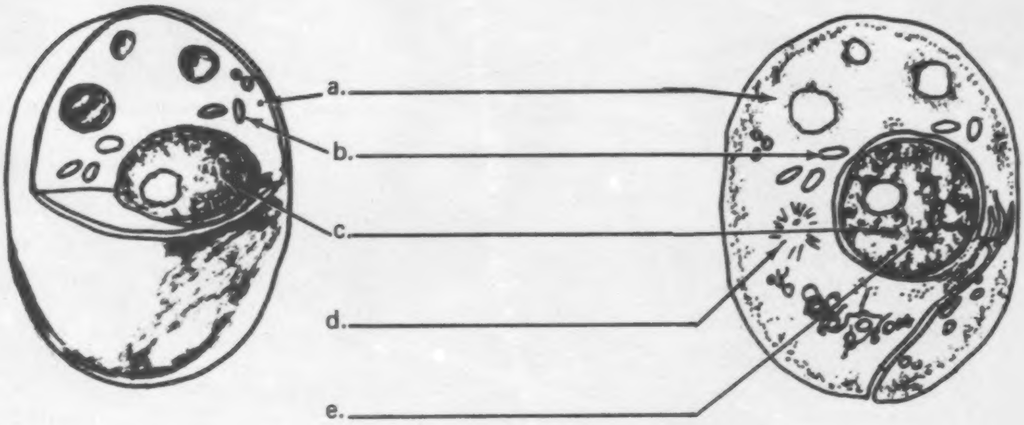
______m. Excretion

______n. Adaptability

______o. Irritability

15. Describe functions of enzymes.

16. Identify the basic parts of a cell. Write the correct names in the blanks.



Cytoplasm

Nucleus

Chromatin material

Centrosome

Mitochondria

17. Describe basic cell components.

a. Cell membrane--____________________

b. Cytoplasm--____________________

c. Nucleus--____________________

d. Mitochondria--____________________

e. Chromatin granules or material--____________________

f. Centrosome--____________________

g. Chromosome--____________________

18. Discuss cell mitosis.

19. Distinguish between the types of movement of material through the cell membrane. Write an "A" for physiologic/active and a "P" for physical/passive in the blanks.

_____a. Requires no energy from the cell; moves through solution methods of movement

_____b. Requires energy from the cell or wraps itself around a foreign particle

20. Match types of passive transport movement to the correct descriptions. Write the correct number in the blanks.

_____a. Solvent molecules pass through a semi-permeable membrane to equalize concentration on each side

_____b. Particles move to equalize concentration throughout

_____c. Particles move through a filter or membrane that prevents passage of certain molecules

1. Diffusion
2. Filtration
3. Osmosis

21. Distinguish between isotonic, hypotonic, and hypertonic solutions. Write an "I" for isotonic, an "H" for hypotonic, and an "X" for hypertonic in the correct blanks.

_____a. Condition in which a solution contains a lesser concentration of dissolved particles than the solution to which it is compared

_____b. Has the same concentration of dissolved particles as the solution with which it is compared

_____c. Condition in which a solution contains a greater concentration of dissolved particles than the solution with which it is compared

22. Distinguish between characteristics of epithelial and connective tissue. Write an "E" for epithelial and a "C" for connective tissue in the correct blanks.

_____a. Protects other tissues; aids in secretion and excretion

_____b. May be thin and fragile or tough and strong

_____c. Has cells that are close together

_____d. Covers surfaces inside and outside the body

_____e. Has many varieties

_____f. Protects, supports, and binds the body together

23. Select from the list below types of muscle tissue. Mark each correct answer with an "X."

______a. Voluntary skeletal muscles that move the body

______b. Voluntary cardiac muscles

______c. Voluntary visceral muscles

______d. Cardiac involuntary muscles

______e. Involuntary sketetal muscles

______f. Involuntary visceral muscles that control internal functions

24. Describe nerve tissue.

____

____

____

____

25. Match types of membranes to the correct descriptions. Write the correct numbers in the blanks.

______a. Secrete serous fluids which lubricate surfaces of inner organs

______b. Secrete mucus and protect the walls of passageways that open to the outside of the body

______c. Cover and protect the body

1. Mucous membranes
2. Serous membranes
3. Cutaneous membranes

26. Match terms associated with points of reference on the body to the correct definitions. Write the correct numbers in the blanks. Definitions are continued on the next page.

______a. Internal organs enclosed within a cavity, especially the abdominal organs

______b. Behind the peritoneum

______c. Chest

______d. Lowest part of trunk

______e. Specified level either horizontal or vertical

______f. Serous membrane that lies over the viscera and lining of the abdominal cavity

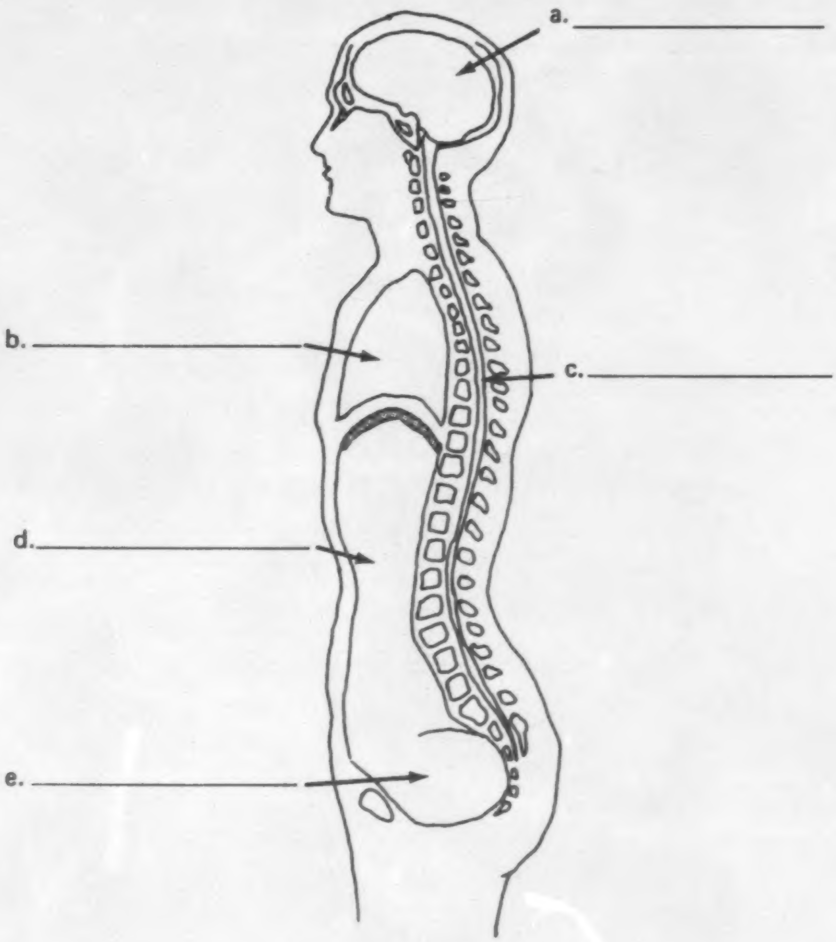
1. Anatomical position
2. Thorax
3. Abdomen
4. Pelvis
5. Cranium
6. Retroperitoneal
7. Peritoneum
8. Viscera
9. Plane

_____g. Skeleton of the head

_____h. Body standing erect with arms at sides and palms facing forward

_____i. Portion of body between thorax and pelvis

27. Identify the body cavities on the diagram of the body below. Write the correct names in the blanks.



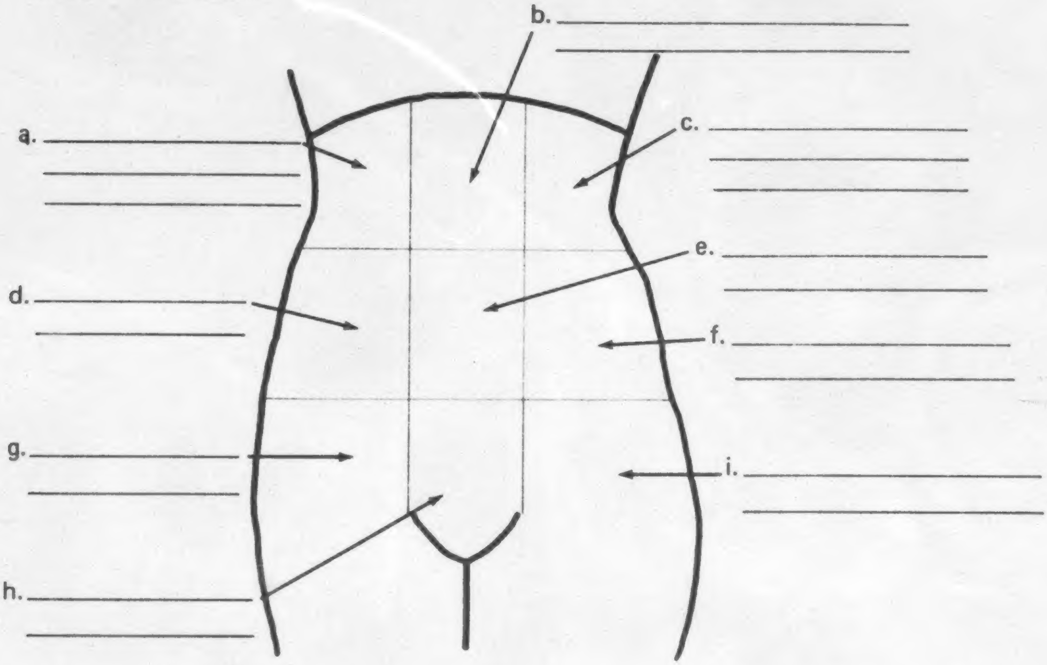
Pelvic cavity
Thoracic cavity

Cranial cavity

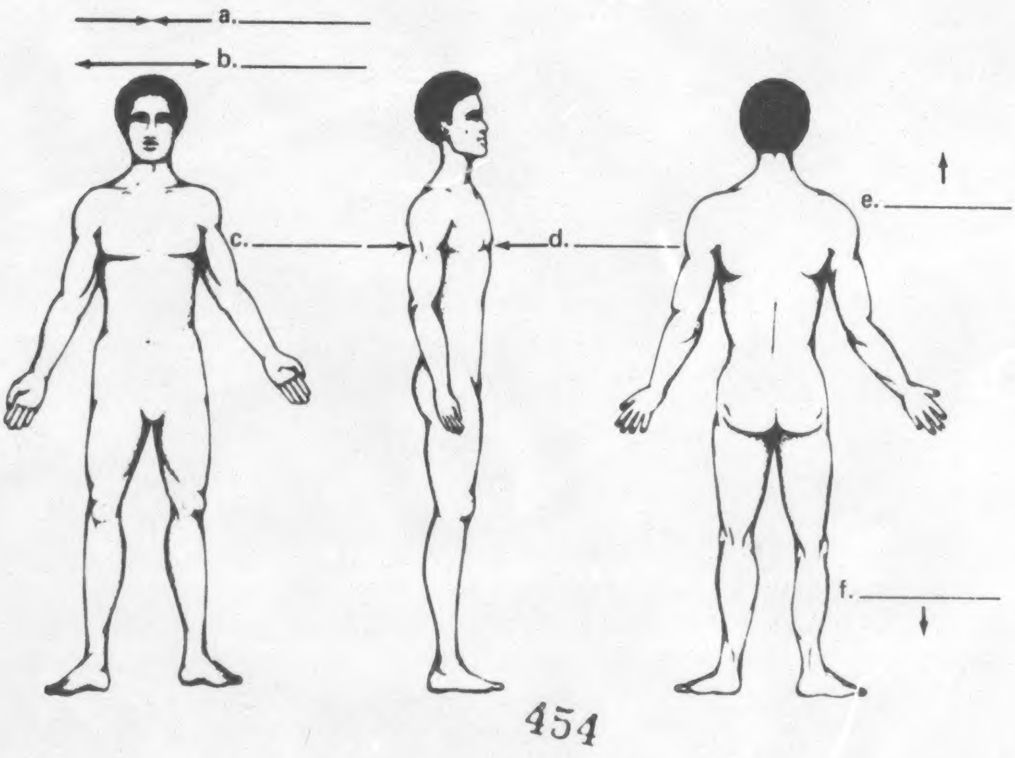
Abdominal cavity

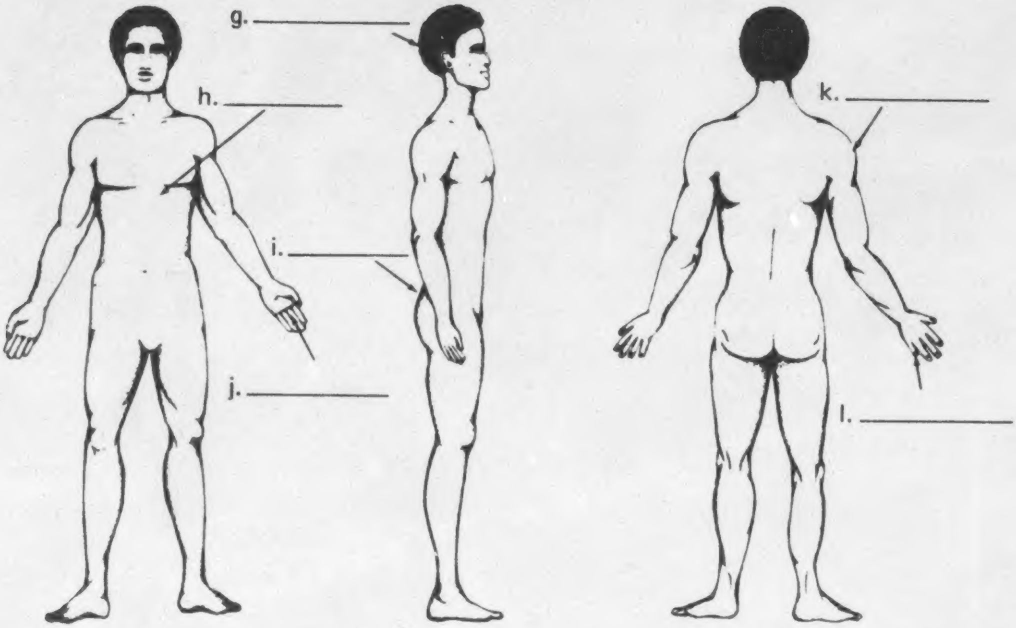
Spinal cavity

28. Label the abdominopelvic regions of the body on the diagram below. Write the correct answers in the blanks.



29. Identify directional terms on the diagrams of the bodies below. Write the correct term in the blanks. Terms are provided on the next page.





Posterior
Medial
Peripheral

Anterior
Central
Inferior

Superior
Cranial
Lateral

Distal
Caudal
Proximal

30. Describe the anatomical planes.

a. Sagittal--____

____

b. Frontal or coronal--____

____

c. Transverse--____

____

31. Classify the pH of solutions.

32. Demonstrate the transport movements of materials.

(NOTE: If activities 31-32 have not been finished before the test, ask your instructor when they should be completed.)

BASIC CONCEPTS OF PHYSICAL AND LIFE SCIENCES
UNIT I

ANSWERS TO TEST

1. a. 4
   b. 10
   c. 12
   d. 6
   e. 2
   f. 7
   g. 1
   h. 5
   i. 11
   j. 9
   k. 8
   l. 3
   m. 15
   n. 14
   o. 16
   p. 17
   q. 13
2. a. L
   b. S
   c. G
3. a. Solutions always tend toward a state of equal concentration
   b. Solutions of higher concentration will tend to flow toward solutions of lower concentration
   c. Liquids, including solutions, always flow toward a condition of least possible hydrostatic pressure
4. a. M
   b. E
   c. C
5. Description should include:
   a. Chemical change
      1) Produces a new substance
      2) Is irreversible or reversible only with difficulty

b. Physical change

1) Produces no new substance

2) Is easily reversible

6. a. Heat

b. Mechanical

c. Radiant

d. Electrical

e. Chemical

7. a. A

b. B

c. B

d. A

e. B

f. A

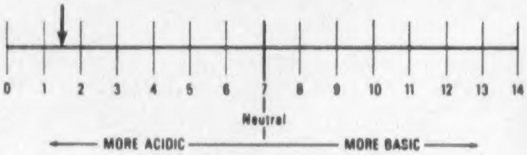
8. Description should include:

a. React with each other to produce salts and water

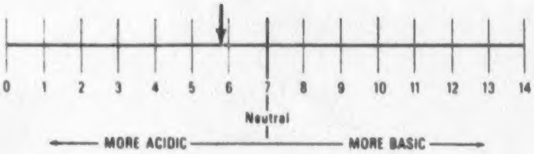
b. Essential to the maintenance of a normal acid-base balance in the body

c. Cause certain dyes to undergo a color change

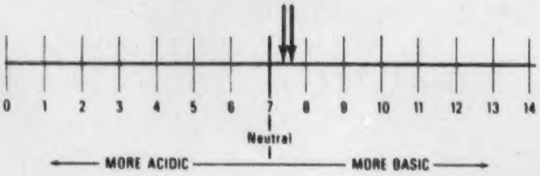
9. a. Gastric juice--1.5


0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Neutral
MORE ACIDIC
MORE BASIC

b. Urine--5.8


0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Neutral
MORE ACIDIC
MORE BASIC

c. Blood--7.35 to 7.45


0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Neutral
MORE ACIDIC
MORE BASIC

10. a, c, d, g

11. a. 18
    b. 13
    c. 2
    d. 16
    e. 7
    f. 5
    g. 15
    h. 3
    i. 14
    j. 8
    k. 17
    l. 1
    m. 12
    n. 9
    o. 4
    p. 11
    q. 6
    r. 10

12. a. A
    b. C

13. a. 5
    b. 3, 4
    c. 6
    d. 1
    e. 2

14. a, d, e, f, h, j, k, m, n, o

15. Description should include:
    a. Act as a catalyst in cells to speed chemical reactions
    b. Break food down in the digestive tract into simpler forms that can be used by the cells
    c. Act only upon a certain substance or group of closely related substances

16. a. Cytoplasm
    b. Mitochondria
    c. Nucleus
    d. Centrosome
    e. Chromatin material

17. Descriptions should include:

    a. Cell membrane--Outer wall; holds the cell together

    b. Cytoplasm--Colorless, transparent substance containing dissolved salts and food substances

    c. Nucleus--Control center containing chromatin and DNA

    d. Mitochondria--Areas that carry on chemical reactions and produce energy

    e. Chromatin granules or material--Part of the nucleus which regulates cell production and growth

    f. Centrosome--Region near the nucleus that contains some DNA and aids in cell division

    g. Chromosome--Body in the nuclear material that determines heredity

18. Discussion should include:

    a. Process by which cells divide and reproduce themselves to produce higher forms of life

    b. Most cells go through mitosis but some cells do not divide and reproduce after birth

    c. Important process to know because various functions depend on this reproduction of cells

19. a. P

    b. A

20. a. 3

    b. 1

    c. 2

21. a. H

    b. I

    c. X

22. a. E

b. C

c. E

d. E

e. C

f. C

23. a, d, f

24. Description should include:

a. Highly specialized cells that conduct impulses throughout the body

b. Found in the brain, spinal cord, and nerve endings all over the body

c. Nerve cells can be completely destroyed if the cell body has been injured

25. a. 2

b. 1

c. 3

26. a. 8

b. 6

c. 2

d. 4

e. 9

f. 7

g. 5

h. 1

i. 3

27. a. Cranial cavity

b. Thoracic cavity

c. Spinal cavity

d. Abdominal cavity

e. Pelvic cavity

28. a. Right hypochondrium

b. Epigastrium

c. Left hypochondrium

d. Right lumbar

e. Umbilical

f. Left lumbar

g. Right inguinal

h. Suprapubic

i. Left inguinal

29. a. Medial
    b. Lateral
    c. Posterior
    d. Anterior
    e. Superior
    f. Inferior
    g. Cranial
    h. Central
    i. Caudal
    j. Peripheral
    k. Proximal
    l. Distal

30. Description should include:

    a. Sagittal--Imaginary line from head to foot, dividing the body into right and left parts

    b. Frontal or coronal--Divides the body into anterior or ventral and posterior or dorsal parts

    c. Transverse--Divides the body into superior and inferior parts

31. Evaluated to the satisfaction of the instructor

32. Evaluated to the satisfaction of the instructor

MICROBIOLOGY, BACTERIOLOGY, AND MEDICAL ASEPSIS
UNIT II

UNIT OBJECTIVE

After completion of this unit, the student should be able to use knowledge of microbiology, bacteriology, and medical asepsis in the performing of skills to prevent the spread of microorganisms. The student should also be able to use proper handwashing technique and clean a patient unit. This knowledge will be evidenced by completion of assignment sheets, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with microbiology, bacteriology, and medical asepsis to the correct definitions.
2. List vital functions of living organisms.
3. List factors that influence growth of microorganisms.
4. Match classes of microorganisms to their descriptions.
5. Distinguish between diseases caused by protozoa, fungi, and rickettsiae.
6. List diseases caused by viruses.
7. List parasitic helminths (worms) which may infect the human body.
8. Identify forms of bacteria.
9. Distinguish between specialized structures of bacteria.
10. Describe endotoxins and exotoxins.
11. Describe growth factors that influence pathogens.
12. Match terms associated with medical asepsis to the correct definitions.
13. Discuss ways organisms are spread.
14. Describe types of medical asepsis.
15. Select from a list functions necessary in medical aseptic technique.
16. State rules to remember when using the aseptic method to care for equipment and supplies.
17. Describe concurrent and terminal cleaning of a patient's unit.

18. Evaluate community resources that protect against harmful microorganisms.
19. Sketch pictures of microorganisms from prepared cultures.
20. Demonstrate the ability to:
    a. Use proper handwashing technique.
    b. Clean a patient unit (terminal).

MICROBIOLOGY, BACTERIOLOGY, AND MEDICAL ASEPSIS
UNIT II

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Discuss unit and specific objectives.

   C. Provide students with information, assignment, and job sheets.

   D. Make transparencies.

   E. Discuss information and assignment sheets.

   F. Take a field trip to a laboratory area to view various tests done for diagnostic tests or research.

   G. Take field trip to local water sanitation plant.

   H. Invite epidemiologist to visit class and speak on ways to prevent the spread of infection, diseases, and the local hospital's methods of checking environment.

   I. Use hospital procedure book as basis for cleaning procedures.

   J. Provide equipment and demonstrate procedures outlined in job sheets.

      (NOTE: Contact the Vestal Laboratories' home office for the name of the representative in your area. This company can provide demonstrations of handwashing using Glow Germ; the company also provides free films, posters, stickers, and a certificate of attendance. The address is Vestal Laboratories, Division of Chemed Corp., 5035 Manchester Avenue, St. Louis, Missouri 63110.)

   K. Allow time for students to practice skills and return demonstrations of skills.

   L. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Transparency masters

      1. TM 1--Protozoa

      2. TM 2--Fungi

3. TM 3--Bacteria
4. TM 4--Rickettsiae and Viruses
5. TM 5--Metazoa (Helminths)
6. TM 6--Cocci and Bacilli
7. TM 7--Specialized Structures of Bacteria
8. TM 8--Toxins
9. TM 9--Ways Organisms Are Spread

D. Assignment sheets

1. Assignment Sheet #1--Evaluate Community Resources that Protect Against Harmful Microorganisms
2. Assignment Sheet #2--Sketch Pictures of Microorganisms from Prepared Cultures

E. Job sheets

1. Job Sheet #1--Use Proper Handwashing Technique
2. Job Sheet #2--Clean a Patient Unit (Terminal)

F. Test

G. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study.* Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

B. Sloan, Jamee. *Health Service Careers.* Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1979.

IV. Additional materials:

A. Filmstrip--*Infection Control Series.* Concept Media, 1980. Available from Concept Media, P.O. Box 19542, Irvine, California 92714.

B. Transparencies--*Disease and Health.* Available from Milliken Publishers, 1100 Research Blvd., St. Louis, Missouri 63132.

(NOTE: This is a full-color transparency booklet.)

C. Microscopes and slide sets--Available from National Teaching Aid Inc., 120 Fulton Ave., Garden City Park, New York 11040.

MICROBIOLOGY, BACTERIOLOGY, AND MEDICAL ASEPSIS
UNIT II

INFORMATION SHEET

I. Terms associated with microbiology, bacteriology, and medical asepsis

A. Microbiology--Study of microorganisms

B. Microorganisms--Tiny living creatures of varying sizes and shapes which ordinarily cannot be seen with the naked eye

C. Pathogen--Microorganism capable of causing a disease

D. Pathology--Study of the nature and cause of disease which involves changes in structure and function

E. Parasite--Organism that lives within, upon, or at the expense of another living organism, known as the *host*

F. Saprophyte--Organism that lives upon the dead remains of plants and animals

G. Anaerobe--Microorganism which thrives or lives only without oxygen

H. Aerobe--Microorganism which can live and grow only in the presence of oxygen

I. Chlorophyll--Green substance in plants which manufactures carbohydrates to use for energy

J. Ultraviolet rays--Those which cause tanning of the skin, production of vitamin D, and destruction of some organisms

K. Optimum--Condition most favorable for growth or activity

L. Yeasts--Unicellular plants which reproduce by budding

M. Bacteriology--Study of bacteria

N. Mold--Any one of a group of parasitic fungi

O. Capsule--Gelatinous outer wall of a bacteria

P. Spore--Coating developed by a few bacteria for protection from unfavorable conditions

Q. Toxin--Poisonous substance produced by some bacteria

R. Endotoxin--Confined within the body of a bacteria

S. Exotoxin--Toxin excreted by a bacteria into its surrounding medium

INFORMATION SHEET

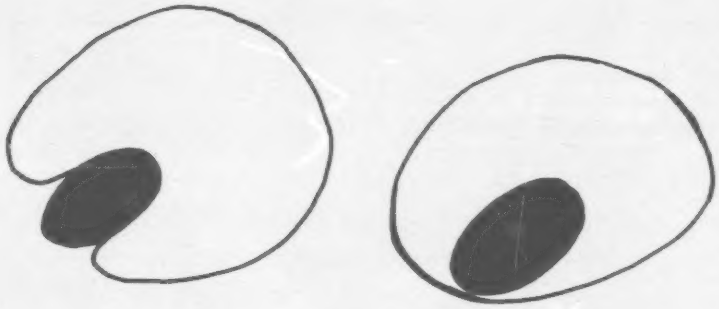
T. Symbiosis--Ability of separate species of microbes to live together

U. Antibiosis--Association in which one species of microorganism prevents growth or destroys another species

V. Flagellum--Hairlike process on a bacteria or protozoan which gives it motility

W. Phagocytosis--Engulfment of bacteria by white blood cells

Example:



II. Vital functions of living organisms

(NOTE: Each individual microorganism is able to carry out some or all of the vital functions characteristic of living organisms.)

A. Metabolism

B. Growth

C. Reproduction

D. Irritability

E. Motion

F. Protection

III. Factors that influence growth of microorganisms

A. Amount of light exposure

(NOTE: Many microorganisms are very low forms of plant life which are colorless, contain no chlorophyll, and grow well in darkness. Many are killed by ultraviolet rays but not affected by moderate light.)

INFORMATION SHEET

B. Temperature range

(NOTE: Optimum temperature for most microorganisms ranges from that of a cool room to slightly above normal human body temperature.)

C. Moisture content

(NOTE: All microorganisms require some moisture for growth.)

D. Amount of food

(NOTE: Most of the organisms discussed in this unit contain no chlorophyll and cannot manufacture their own food from raw materials.)

E. Supply of oxygen

(NOTE: Some microorganisms [anaerobic] do not need oxygen to survive, and others [aerobic] must have a supply of oxygen.)

IV. Classes of microorganisms (Transparencies 1, 2, 3, 4, and 5)

A. Protozoa--Unicellular animals capable of movement by a variety of means

B. Fungi--Division of plantlike organisms that includes molds and yeasts

C. Bacteria--Microscopic unicellular organisms that may take on various forms

Examples: Diplococci, staphylococci, bacilli, spirilla

(NOTE: Bacteria may be non-pathogenic and very useful, or pathogenic.)

Examples: Non-pathogenic bacteria aid in decomposing organic matter and in the production of some foods and chemicals, such as cheese. Pathogenic bacteria cause diseases such as syphilis, tuberculosis, typhoid, and whooping cough

D. Rickettsiae--Organisms that are smaller than bacteria but larger than a virus

(NOTE: These grow only within the cells of the living host.)

E. Viruses--Organisms which cannot grow or reproduce until they have taken over a living cell

(NOTE: An electron microscope must be used to study the virus.)

F. Metazoa--Multicellular animals whose cells become differentiated to form tissues

Example: Helminths (parasitic worms)

INFORMATION SHEET

G. Protista--Kingdom of organisms including the simpler animals and plants characterized by being acellular or unicellular

Examples: Bacteria, some algae, spirochetes

V. Diseases caused by protozoa, fungi, and rickettsiae

A. Protozoa

(NOTE: Diseases caused by protozoa are sometimes transmitted by insects.)

1. Amoebic dysentery
2. Malaria
3. Trichomonas

(NOTE: This organism may cause vaginitis.)

B. Fungi

(NOTE: This group includes molds and yeasts.)

1. Molds
    a. Ringworm

    (NOTE: This is also called *tinea capitis*.)

    b. Athlete's foot

    (NOTE: This is also called *epidermophytosis*.)

2. Yeasts
    a. Thrush
    b. Vaginitis

    (NOTE: These are *monilia* or *candida* infections.)

C. Rickettsiae

1. Rocky Mountain spotted fever
2. Typhus
3. Q fever

INFORMATION SHEET

VI. Diseases caused by viruses (Assignment Sheet #1)

A. Smallpox (variola)

B. Chickenpox (varicella)

C. Measles (rubeola)

D. German measles (rubella)

E. Influenza

F. Infantile paralysis (poliomyelitis)

G. Mumps (epidemic parotitis)

H. Common cold (coryza)

I. Fever blisters (herpes simplex)

J. Shingles (herpes zoster)

K. Rabies

VII. Parasitic helminths (worms) which may infect the human body (Transparency 5)

A. Roundworm

(NOTE: The trichinella is a member of this group.)

B. Pinworm

C. Hookworm

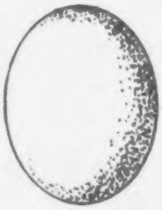
D. Flatworm

(NOTE: The tapeworm is a member of this group.)

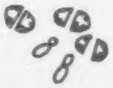
VIII. Forms of bacteria (Transparency 6, Assignment Sheet #2)

(NOTE: Names of bacteria are taken from the shapes and forms seen.)

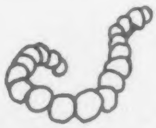
A. Spherical or round forms (coccus or cocci)



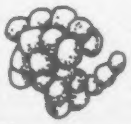
1. Coccus



2. Diplococci (in pairs)



3. Streptococci (in chains)

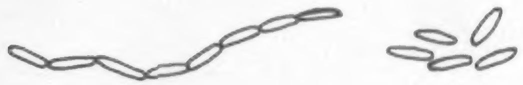


4. Staphylococci (in clusters)

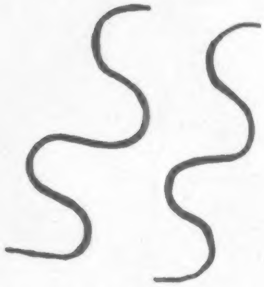
INFORMATION SHEET

B. Bacilli (rod or cylinder shapes)

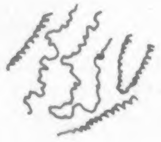
(NOTE: There are many different forms of bacilli, some with rounded edges, concave edges, or pointed edges.)



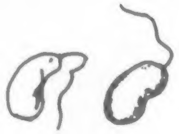
C. Spiral or curved forms



1. Spirilla



2. Spirochetes



3. Vibrios

IX. Specialized structures of bacteria (Transparency 7)

A. Spores

1. Produced by only a few forms of bacilli; each bacillus forms one spore
2. Are inactive, dormant forms, not reproductive forms
3. Resist drying, boiling, and most chemical disinfectants
4. Spore-forming pathogens include the organisms which cause anthrax, botulism, tetanus, and gas gangrene

B. Capsules

1. Surround most bacterial cells
2. Increase virulence of bacteria
3. Interfere with phagocytosis

INFORMATION SHEET

4. Aid in identification

C. Flagella

1. Give bacteria ability to move

2. Present in about half of the rod forms and all spirilla forms; not present in the coccal forms

3. Presence or absence aids in identification

(NOTE: Spirochetes do not possess flagella, but are motile by rotating in a corkscrew fashion.)

X. Endotoxins and exotoxins (Transparency 8)

A. Endotoxins--Remain within the cell until the cell disintegrates

Examples: Organisms that cause typhoid fever and bacillary dysentery

B. Exotoxins--Go out of the intact bacterial cells into the surrounding medium or tissue

Examples: Organisms causing tetanus, gas gangrene, diptheria, and scarlet fever

XI. Growth factors that influence pathogens

A. Amount of moisture

1. Drying kills some bacteria

Examples: Gonorrhea and syphilis

2. Some organisms can stand drying and will activate at a later time

B. Amount of food

1. Pathogenic organisms require organic food and are either saprophytes or parasites

2. Pathogens require vitamins and all elements that comprise the bacterial cell

C. Oxygen

1. Most bacteria require free or atmospheric oxygen (aerobes)

2. Some bacteria can live without oxygen (anaerobes)

D. Temperature

1. Hot and cold temperature may kill or reduce growth and metabolic activities, depending on the organism

INFORMATION SHEET

    2. Heat will destroy most bacteria, but freezing does not always destroy bacteria and may only reduce their activity

  E. pH

    1. Bacteria grow best closer to the neutral point or slightly on the alkaline side

    2. Acids and alkalis are harmful to bacteria

  F. Light

    1. Sunlight kills most bacteria

    2. Sunlight stimulates spore formation

  G. Effects on neighboring microorganisms

    1. Some bacteria are totally independent

    2. Other bacteria depend on their surrounding microorganisms (symbiosis)

XII. Terms associated with medical asepsis

  A. Asepsis--Absence of microorganisms which cause infections

  (NOTE: Using aseptic technique means to use a process or procedure that is free of microorganisms.)

  B. Carrier--Person who harbors a specific pathogen without any symptoms, but who is potentially capable of spreading the organism to others

  C. Clean--Uncontaminated; relatively free of pathogens

  D. Contact--Association between persons or objects; exposure to pathogenic organisms

  E. Contagious--Communicable; readily transmitted from one person to another, directly or indirectly

  F. Direct contact--Transmission of an infection from one person to another

  G. Indirect contact--Transmission of a contagious disease by some medium other than direct touch of the infected person

  H. Contaminate--To make unsterile or unclean by direct contact or exposure

  I. Disinfection--Freeing from pathogens by physical or chemical means

INFORMATION SHEET

J. Infection--Invasion of the body by microorganisms

K. Cross-infection--One transmitted between patients infected with different pathogens

L. Nosocomial--Infection that has been acquired while in the hospital

M. Isolation--Limiting movement and social contacts of a carrier or a person with an infection or communicable disease

N. Quarantine--Restricting movements and social contacts of persons exposed to or having a communicable disease

O. Sterile--Free from living microorganisms

P. Sepsis--Presence of pathogens or toxins in the blood or tissues

Q. Furuncle--Infected area known as a *boil*

R. Concurrent disinfection--Daily care of all contaminated equipment and utensils

S. Terminal disinfection--Care of utensils and equipment when patient has been dismissed or transferred from a unit

T. Bacteriostatic--Inhibiting or retarding bacterial growth

U. Bactericidal--Having the characteristic of destroying bacteria

V. Antiseptic--Agent that will prevent the growth or production of microorganisms

(NOTE: Many people believe that an antiseptic is the same as a disinfectant. This is a misconception because a disinfectant can kill bacteria.)

XIII. Ways organisms are spread (Transparency 9)

A. Organisms can be spread from worker to worker, worker to patient, and from patient to patient

(NOTE: The MOST IMPORTANT methods to use to prevent the spread of organisms are to WASH HANDS frequently and to COVER FACE when coughing or sneezing.)

B. Contaminated equipment can carry harmful microorganisms

Example: Using one piece of equipment for several patients

(NOTE: It is each person's responsibility to keep equipment as clean as possible. This means using the best method recommended for the cleaning, disinfection, or sterilization of the equipment. If in doubt, do not use the piece of equipment or re-clean before use.)

INFORMATION SHEET

XIV. Types of medical asepsis

A. Aseptic technique--Used in all general nursing care to avoid the spread of microorganisms

B. Isolation technique--Used in a unit that has a patient with an infection or a contagious disease

C. Reverse or protective isolation technique--Used in a unit that has a patient with a very low resistance or large open wounds or lesions

Example: Patient that has large burned area that could be open to infection, and is also debilitated and resistance is weak

XV. Functions necessary in medical aseptic technique (Job Sheet #1)

(NOTE: There are several procedures that will assist you in preventing the spread of microorganisms. If more of these steps were followed, there would be less infection spread among persons.)

A. Wash hands before, during, and after caring for patient

B. Keep nails short and clean

C. Keep hands free of cuts and abrasions

D. Remove and handle linens to keep soiled portions to the inside, avoiding contact with clothing and clean articles

E. Dispose of soiled dressings, discharges, and body wastes promptly and safely

(NOTE: Each facility has its own procedure for collecting, cleansing, or destroying linens, equipment, and waste materials. Make sure you understand thoroughly the process used and follow it closely.)

F. Keep patient's unit and utensils clean

G. Clean equipment thoroughly after use

H. Care promptly for infected areas, such as acne and furuncles

XVI. Rules to remember when using aseptic method to care for equipment and supplies

A. Disposable articles must be discarded in a safe manner

B. Washable articles must be thoroughly cleaned and disinfected before use by another patient

C. Metal instruments must be scrubbed and sterilized or disinfected between uses

INFORMATION SHEET

D. Rubber goods which are not disposable must be disinfected and dried before storage

E. Sterile equipment must be stored properly to avoid contamination

F. Equipment should be used carefully and safely to avoid waste and contamination

XVII. Concurrent and terminal cleaning of a patient's unit (Job Sheet #2)

(NOTE: Cleaning of a patient's unit is usually done by a housekeeping employee, but it is important for you to assist by doing some of the following tasks.)

A. Concurrent

(NOTE: Concurrent is an ongoing process and is done while the patient is hospitalized.)

1. Place all soiled linens in the place provided for them
2. Discard all disposable articles and soiled paper products
3. Clean utensils and return to patient's bedside or storage area
4. Clean bedside table, bed, and other furniture daily as directed for types of equipment

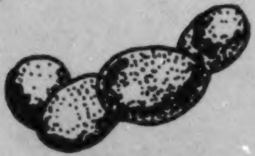
B. Terminal

1. Discard all contaminated articles as directed
2. Return equipment to proper places after cleaning and disinfecting or sending them to be sterilized
3. Wash or disinfect unit as directed
4. Prepare unit for next patient

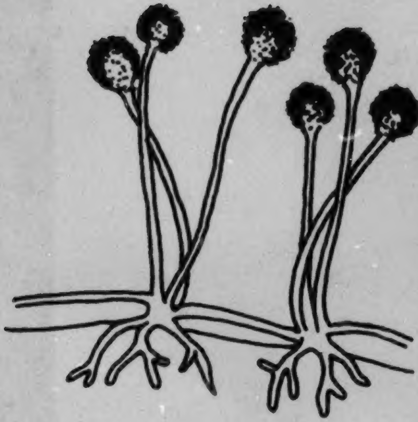
(NOTE: Many hospitals have a special person known as an *epidemiologist* who is responsible for checking the environment for harmful microorganisms after the patient has been released from the hospital. The room and equipment are checked by various methods of study.)

Protozoa

Fungi

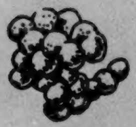


Yeast Cells

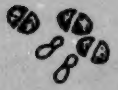


Molds

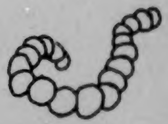
Bacteria



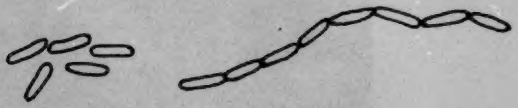
Staphylococci



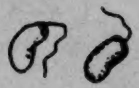
Diplococci



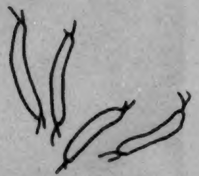
Streptococci



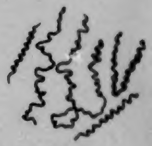
Bacilli (in Chains)



Vibrios



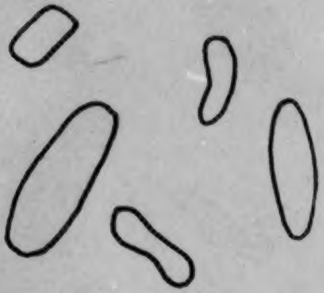
Spirilla



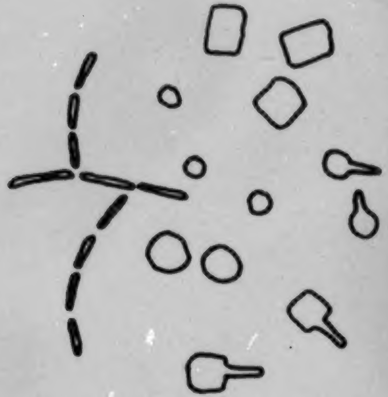
Spirochetes

Rickettsiae and Viruses

(As Seen Under an Electron Microscope)



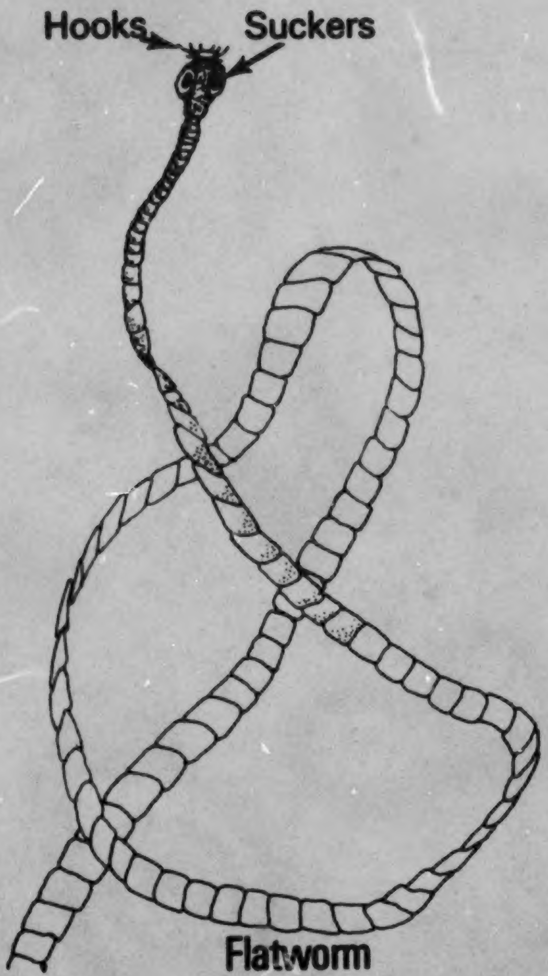
Rickettsiae



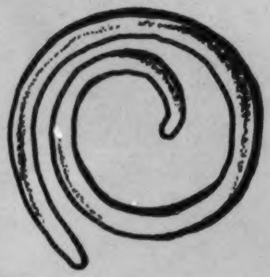
Viruses

Metazoa

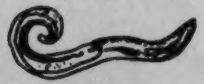
(Helminths)



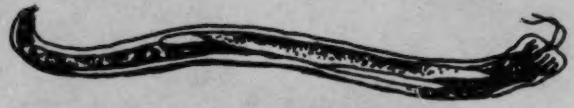
Flatworm



Roundworm



Pinworm

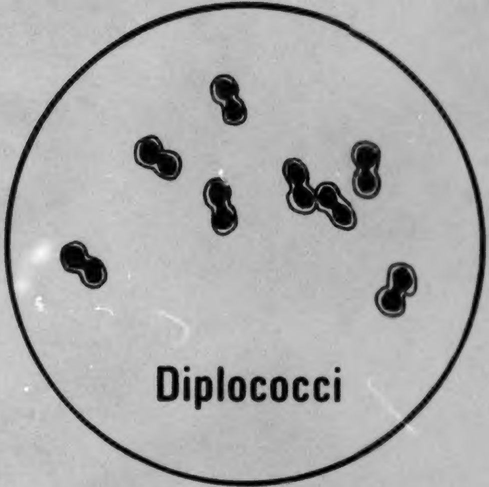


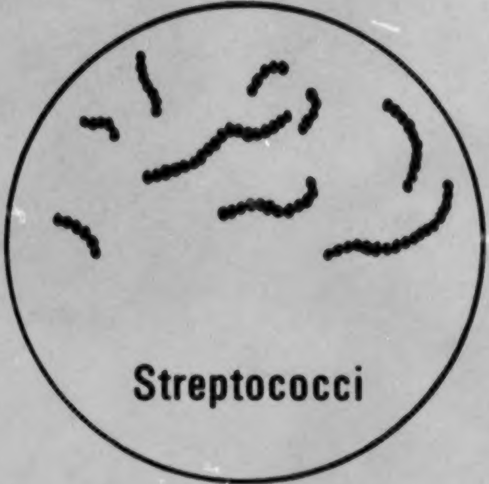
Hookworm

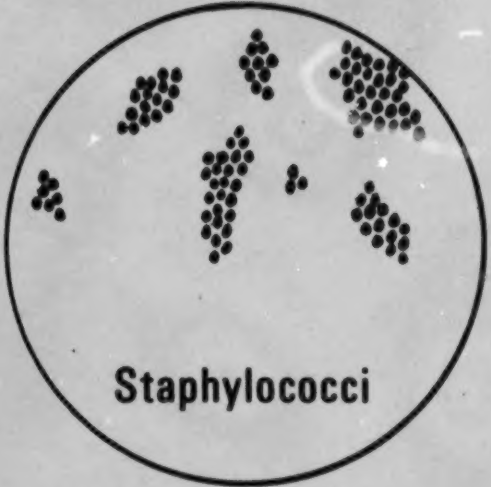
Illustration of roundworm used with permission of the University of Illinois from *Principal Parasites of Domestic Animals in the United States*, by Virginia Ivens, Daniel Mark, and Norman Levine, copyright 1978.

Cocci and Bacilli

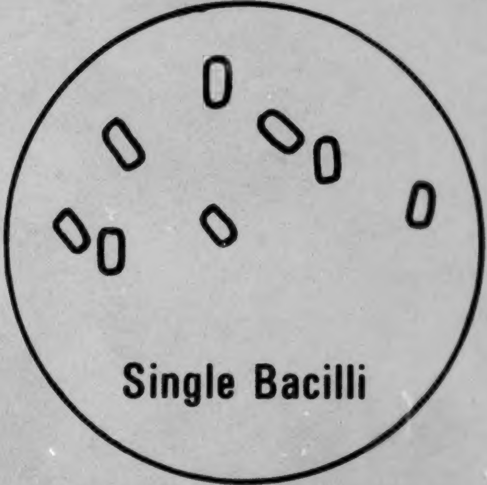
COCCI

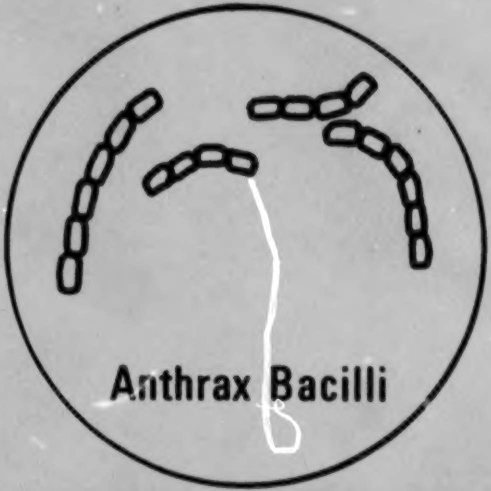

Diplococci

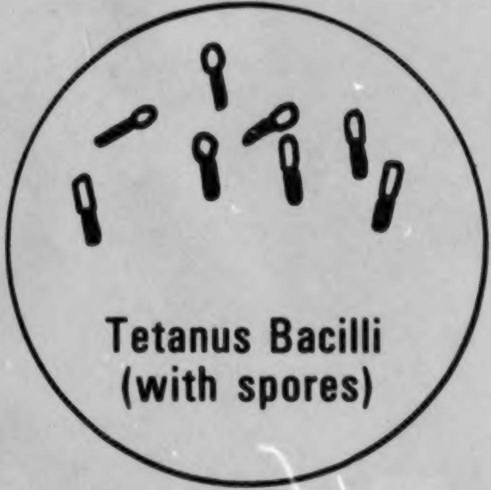

Streptococci


Staphylococci

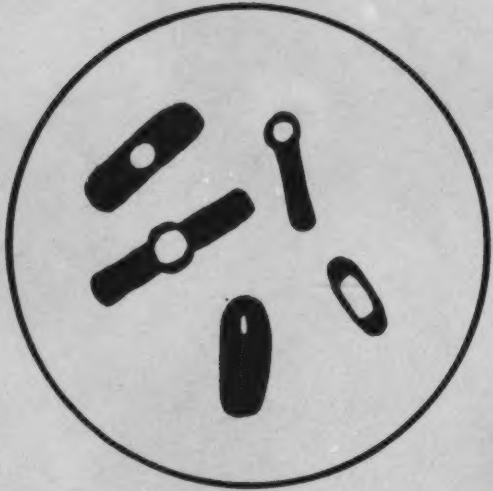
BACILLI


Single Bacilli

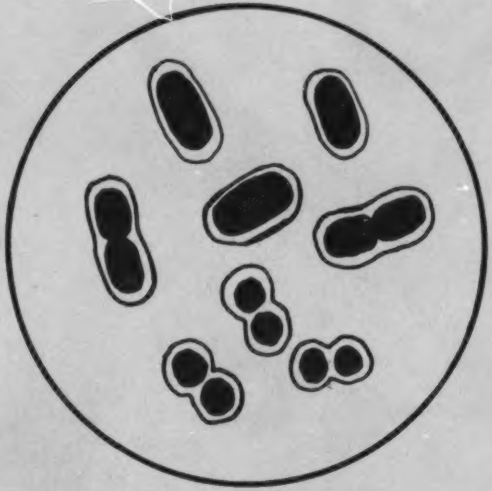

Anthrax Bacilli


Tetanus Bacilli
(with spores)

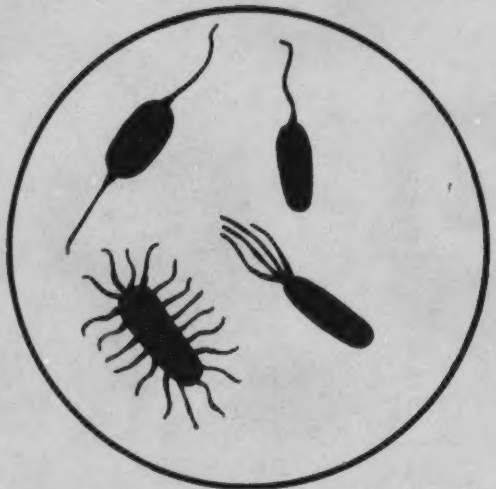
Specialized Structures of Bacteria



Spores
(white structures)

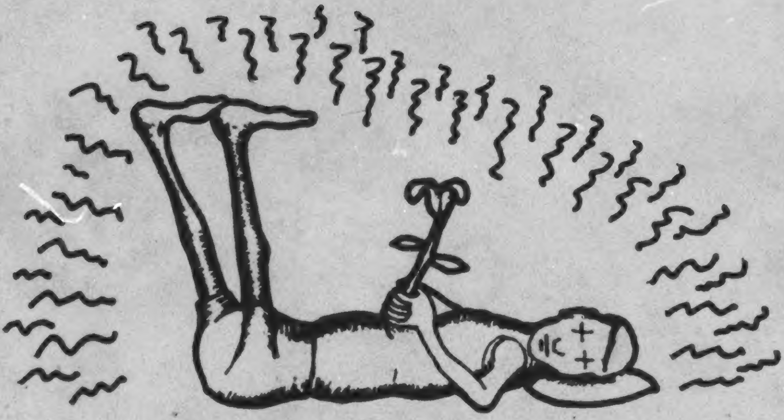


Bacteria with Capsules

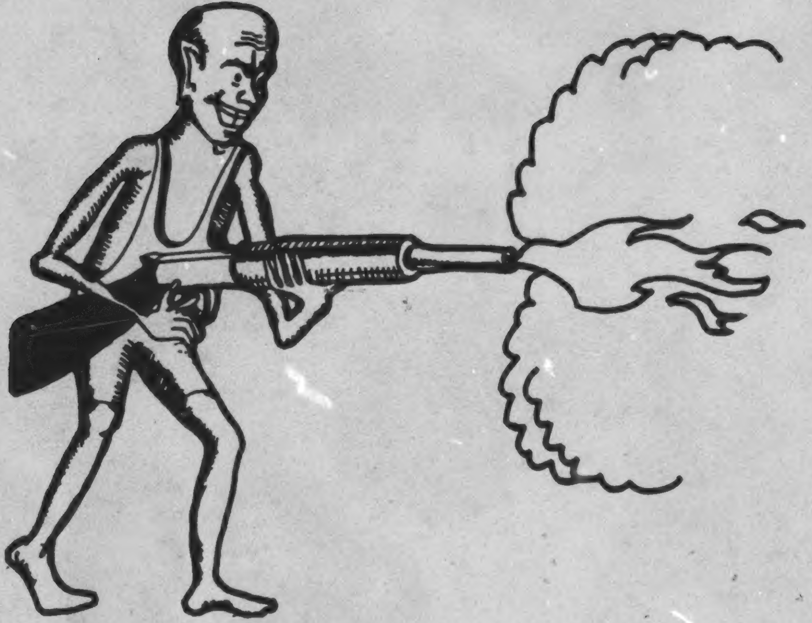


Flagella

Toxins



ENDOTOXIN



EXOTOXIN

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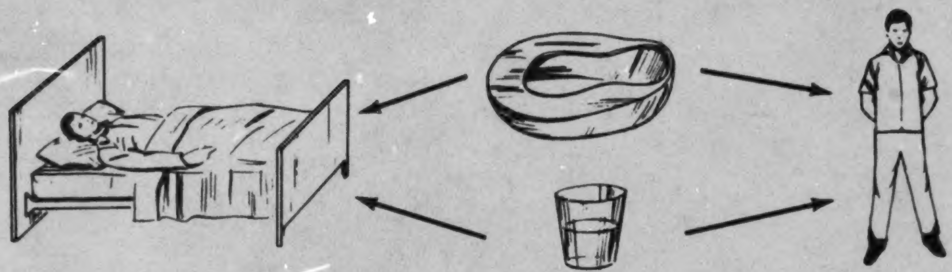
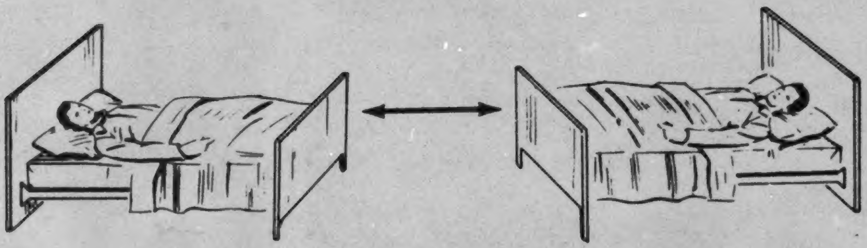
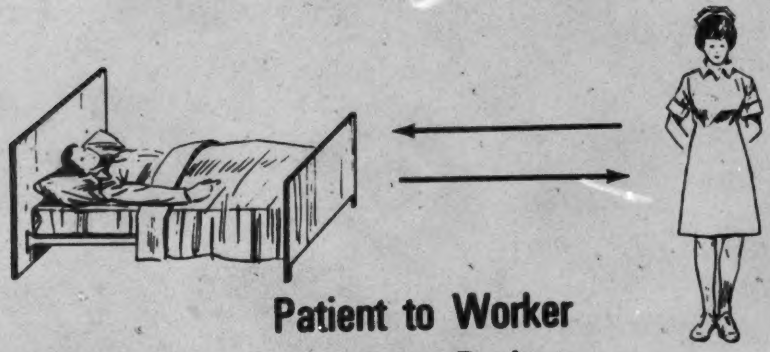
Ways Organisms Are Spread



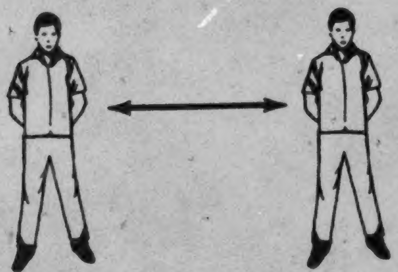
Hospital Equipment to Patient or Worker



Patient to Patient



Patient to Worker
Worker to Patient



Worker to Worker

MICROBIOLOGY, BACTERIOLOGY, AND MEDICAL ASEPSIS
UNIT II

ASSIGNMENT SHEET #1--EVALUATE COMMUNITY RESOURCES THAT PROTECT AGAINST HARMFUL MICROORGANISMS

NAME ______________________________ SCORE ______________

Each community must take definite measures to protect citizens from harmful diseases caused by microorganisms out of control. Locate in your city agencies or organizations that are responsible for enforcing laws or carrying out procedures that protect your environment. Report back to class your findings, including the name of the agencies, their function, who funds their operations, and a list of specific tasks that help protect the community. Suggestions include the Department of Health, County Health Department, Sanitation Department, Environmental Protection Agency, Food and Drug Administration, and the Animal Welfare Department.

COMMUNITY RESOURCE	FUNCTION	FUNDING SOURCE	SPECIFIC TASKS

MICROBIOLOGY, BACTERIOLOGY, AND MEDICAL ASEPSIS
UNIT II

ASSIGNMENT SHEET #2--SKETCH PICTURES OF MICROORGANISMS FROM PREPARED CULTURES

NAME ______________________ SCORE __________

Using agar plates or test tubes with appropriate medium, prepare a culture of microorganisms following instructions given by instructor.

1. Wash hands with soap and water.
2. Place fingertips gently on medium or, using orange stick, clean beneath fingernail and place matter on medium.
3. Identify plate as instructed.

Growth will be incubated and returned to you.

Draw and describe below what kind of culture you see. If possible, borrow a microscope to view microorganisms.

Compare your observation with pictures of staphylococci, streptococci, diplococci, and others. Can you find any similarity?

MICROBIOLOGY, BACTERIOLOGY, AND MEDICAL ASEPSIS
UNIT II

JOB SHEET #1--USE PROPER HANDWASHING TECHNIQUE

I. Equipment

  A. Soap

  (NOTE: It is best to use a mechanical soap dispenser if available.)

  B. Paper towels

  C. Running water

  D. Hand brush if needed

  E. Waste receptacle

II. Procedure

  A. Turn on water and regulate temperature

    1. When using foot-controlled faucets, turn water on when needed

    2. When using hand-controlled faucets, leave water running throughout procedure

  B. Apply soap to cover entire area of hands and wrists

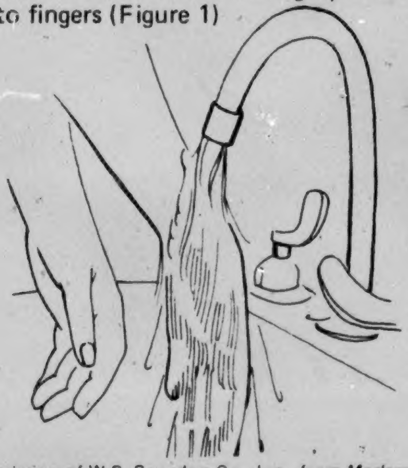
  C. Add water as necessary to keep lather moist

  D. Continue washing hands and use friction for 30 seconds to two minutes

  E. Use hand brush and clean nails if needed

  F. Rinse hands and wrists thoroughly with water flow directed from wrists down to fingers (Figure 1)

FIGURE 1



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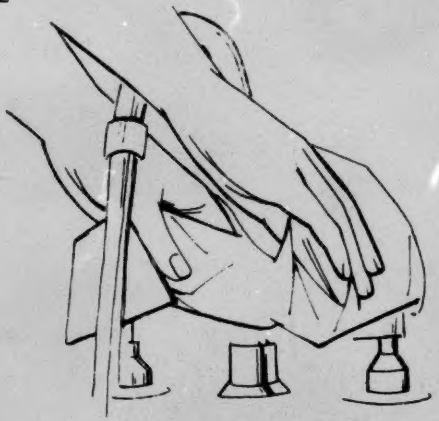
JOB SHEET #1

G. Soap hands again and rinse well

H. Dry hands well

I. Turn off faucets with dry paper towel, if hand-controlled (Figure 2)

FIGURE 2



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J. Discard towel in proper waste receptacle

JOB SHEET #1

III. Checklist for using proper handwashing technique

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ____________________ ____________________ ____________________		
B. Turned on water and regulated temperature	☐	☐
Comments: ____________________ ____________________ ____________________		
C. Turned water on when needed, if foot-controlled faucets; left water running, if hand-controlled faucets	☐	☐
Comments: ____________________ ____________________ ____________________		
D. Applied soap correctly to cover entire area of hands and wrists	☐	☐
Comments: ____________________ ____________________ ____________________		
E. Added water as necessary to keep lather moist	☐	☐
Comments: ____________________ ____________________ ____________________		

JOB SHEET #1

		Performed well	Needs improvement
F.	Continued washing hands and used friction for 30 seconds to two minutes	☐	☐
	Comments: ______________________________		
G.	Used hand brush correctly and cleaned nails, if needed	☐	☐
	Comments: ______________________________		
H.	Rinsed hands and wrists thoroughly with water flow directed from wrists down to fingers	☐	☐
	Comments: ______________________________		
I.	Soaped hands a second time and rinsed well	☐	☐
	Comments: ______________________________		
J.	Dried hands well	☐	☐
	Comments: ______________________________		

JOB SHEET #1

	Performed well	Needs improvement
K. Turned off faucets with dry paper towel, if faucets were hand-controlled	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
L. Discarded towel in proper waste receptacle	☐	☐

Comments: ____________________

____

____

MICROBIOLOGY, BACTERIOLOGY, AND
MEDICAL ASEPSIS
UNIT II

JOB SHEET #2--CLEAN A PATIENT UNIT (TERMINAL)

I. Equipment

   A. Receptacle for soiled linen

   B. Basin with disinfectant solution

   C. Pair of unsterile gloves

   (CAUTION: Disinfectant is usually quite strong and can be harmful to skin.)

   D. Cleaning cloths

   E. Clean linen

   F. Newspaper or plastic bag

II. Procedure

   A. Check unit for articles left by last patient

   (NOTE: Turn these in to supervisor.)

   B. Remove each piece of linen separately

   (CAUTION: Do not shake linens; hold them away from uniform.)

   C. Place used linens in receptacle for soiled linen

   D. Take bedside utensils to utility room for cleaning

   E. Place basin with disinfectant solution on bedside table

   F. Move mattress crosswise to foot of bed

   G. Put gloves on, if desired

   H. Wash and dry top and sides of mattress

   I. Raise headrest

   J. Wash and dry all exposed parts of bed

   K. Lower headrest

   L. Turn mattress, clean side down, onto half of bed

JOB SHEET #2

M. Wash and dry other side of mattress

N. Place rubber sheet on springs

O. Wash and dry one side of rubber sheet

P. Place rubber sheet on mattress, clean side down

Q. Wash and dry other side of rubber sheet

R. Raise foot of bed

S. Wash and dry all exposed parts of bed

T. Wash and dry bedside table and other furniture

U. Put basin of disinfectant solution on a newspaper or plastic bag spread on floor

V. Return cleaning equipment to utility room and care for it properly

(NOTE: This procedure may vary with each institution.)

W. Place bedside utensils in unit

X. Make closed bed

(NOTE: This procedure may vary with each institution.)

JOB SHEET #2

III. Checklist for cleaning a patient unit (terminal)

	Performed well	Needs improvement
A. Gathered necessary equipment and brought to unit	☐	☐
Comments: ______________________________		
B. Checked unit for articles left by last patient	☐	☐
Comments: ______________________________		
C. Removed each piece of linen separately	☐	☐
Comments: ______________________________		
D. Placed used linens in receptacle for soiled linen	☐	☐
Comments: ______________________________		
E. Took bedside utensils to utility room for cleaning	☐	☐
Comments: ______________________________		

JOB SHEET #2

	Performed well	Needs improvement
F. Placed basin with disinfectant solution on bedside table	☐	☐
Comments: ________________		
G. Moved mattress crosswise to foot of bed	☐	☐
Comments: ________________		
H. Put gloves on, if desired	☐	☐
Comments: ________________		
I. Washed and dried top and sides of mattress	☐	☐
Comments: ________________		
J. Raised headrest and washed and dried all exposed parts of bed	☐	☐
Comments: ________________		

JOB SHEET #2

III. Checklist for cleaning a patient unit (terminal)

		Performed well	Needs improvement
A.	Gathered necessary equipment and brought to unit	☐	☐
	Comments: ____________________		
B.	Checked unit for articles left by last patient	☐	☐
	Comments: ____________________		
C.	Removed each piece of linen separately	☐	☐
	Comments: ____________________		
D.	Placed used linens in receptacle for soiled linen	☐	☐
	Comments: ____________________		
E.	Took bedside utensils to utility room for cleaning	☐	☐
	Comments: ____________________		

JOB SHEET #2

	Performed well	Needs improvement
F. Placed basin with disinfectant solution on bedside table	☐	☐
Comments: ____ ____ ____		
G. Moved mattress crosswise to foot of bed	☐	☐
Comments: ____ ____ ____		
H. Put gloves on, if desired	☐	☐
Comments: ____ ____ ____		
I. Washed and dried top and sides of mattress	☐	☐
Comments: ____ ____ ____		
J. Raised headrest and washed and dried all exposed parts of bed	☐	☐
Comments: ____ ____ ____		

JOB SHEET #2

		Performed well	Needs improvement
K.	Lowered headrest	☐	☐
	Comments: ________		
L.	Turned mattress, clean side down, onto half of the bed	☐	☐
	Comments: ________		
M.	Washed and dried other side of mattress	☐	☐
	Comments: ________		
N.	Placed rubber sheet on springs	☐	☐
	Comments: ________		
O.	Washed and dried one side of rubber sheet	☐	☐
	Comments: ________		

JOB SHEET #2

		Performed well	Needs improvement
P.	Placed rubber sheet on mattress, clean side down	☐	☐

Comments: ______________________________

____

____

Q.	Washed and dried other side of rubber sheet	☐	☐

Comments: ______________________________

____

____

R.	Raised foot of bed; washed and dried all exposed parts of bed, and lowered foot of bed	☐	☐

Comments: ______________________________

____

____

S.	Washed and dried bedside table and other furniture	☐	☐

Comments: ______________________________

____

____

T.	Put basin of disinfectant solution on a newspaper or plastic bag spread on floor	☐	☐

Comments: ______________________________

____

____

JOB SHEET #2

		Performed well	Needs improvement
U.	Returned cleaning equipment to utility room and cared for properly	☐	☐
	Comments: ________________________________		
V.	In unit placed bedside utensils	☐	☐
	Comments: ________________________________		
W.	Correctly made closed bed	☐	☐
	Comments: ________________________________		

PN 1 - 133-C

MICROBIOLOGY, BACTERIOLOGY, AND MEDICAL ASEPSIS
UNIT II

TEST

NAME ______________________________ SCORE ______________

1. Match terms associated with microbiology, bacteriology, and medical asepsis to their correct definitions. Write the correct numbers in the blanks.

_____a. Poisonous substance produced by some bacteria

_____b. Microorganism which can live and grow only in the presence of oxygen

_____c. Unicellular plants which reproduce by budding

_____d. Tiny living creatures of varying sizes and shapes which ordinarily cannot be seen with the naked eye

_____e. Engulfment of bacteria by white blood cells

_____f. Association in which one species of microorganism prevents growth or destroys another species

_____g. Green substance in plants which manufactures carbohydrates to use for energy

_____h. Organism that lives within, upon, or at the expense of another living organism, known as the *host*

_____i. Hairlike process on a bacteria or protozoan which gives it motility

_____j. Toxin excreted by a bacteria into its surrounding medium

_____k. Study of microorganisms

_____l. Those which cause tanning of the skin, production of vitamin D, and destruction of some organisms

_____m. Any one of a group of parasitic fungi

1. Microbiology
2. Microorganisms
3. Toxin
4. Parasite
5. Antibiosis
6. Phagocytosis
7. Aerobe
8. Chlorophyll
9. Ultraviolet rays
10. Exotoxin
11. Yeasts
12. Flagellum
13. Mold

_____n. Microorganism capable of causing a disease

_____o. Organism that lives upon the dead remains of plants and animals

_____p. Gelatinous outer wall of a bacteria

_____q. Microorganism which thrives or lives only without oxygen

_____r. Condition most favorable for growth or activity

_____s. Study of bacteria

_____t. Coating developed by a few bacteria for protection from unfavorable conditions

_____u. Confined within the body of a bacteria

_____v. Ability of separate species of microbes to live together

_____w. Study of the nature and cause of disease which involves changes in structure and function

14. Capsule
15. Spore
16. Pathogen
17. Endotoxin
18. Optimum
19. Symbiosis
20. Saprophyte
21. Bacteriology
22. Anaerobe
23. Pathology

2. List below vital functions of living organisms. Mark each correct answer with an "X."

a. ____

b. ____

c. ____

d. ____

e. ____

f. ____

3. List factors that influence growth of microorganisms.

a. ____

b. ____

c. ____

d. ____

e. ____

4. Match classes of microorganisms to their correct descriptions. Write the correct numbers in the blanks.

_____ a. Division of plantlike organisms that includes molds and yeasts

_____ b. Kingdom of organisms including the simpler animals and plants characterized by being acellular or unicellular

_____ c. Microscopic unicellular organisms that may take on various forms

_____ d. Organisms that are smaller than bacteria but larger than a virus

_____ e. Unicellular animals capable of movement by a variety of means

_____ f. Organisms which cannot grow or reproduce until they have taken over a living cell

_____ g. Multicellular animals whose cells become differentiated to form tissues

1. Protozoa
2. Fungi
3. Bacteria
4. Rickettsiae
5. Viruses
6. Metazoa
7. Protista

5. Distinguish between diseases caused by protozoa, fungi, and rickettsiae. Write a "P" for protozoa, an "F" for fungi, and an "R" for rickettsiae in the blanks.

_____ a. Trichomonas

_____ b. Thrush

_____ c. Ringworm

_____ d. Typhus

_____ e. Ameobic dysentery

_____ f. Vaginitis

_____ g. Q fever

_____ h. Malaria

_____ i. Rocky Mountain spotted fever

_____ j. Athlete's foot

6. List diseases caused by viruses.

a. ____

b. ____

c. ____

d.

e.

f.

g.

h.

i.

j.

k.

7. List below parasitic helminths (worms) which may infect the human body.

a.

b.

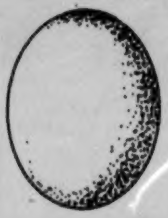
c.

d.

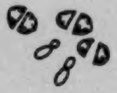
8. Identify forms of bacteria. Write the correct names in the blanks.

Bacilli (rod or cylinder shapes)
Vibrios
Spiral or curved forms
Spirilla
Coccus
Spherical or round forms (coccus or cocci)
Diplococci (in pairs)
Streptocci (in chains)
Spirochetes
Staphylococci (in clusters)

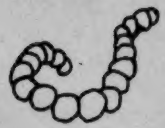
a.



1)

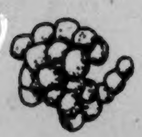


2)



3) ______________________

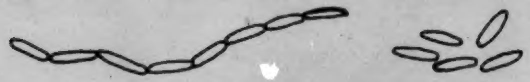
____



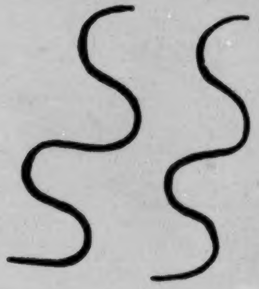
4) ______________________

____

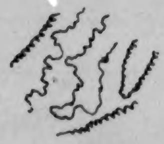
b. ____



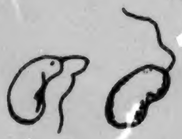
c. ____



1) ____________________



2) ____________________



3) ____________________

9. Distinguish between specialized structures of bacteria. Write an "S" for spores, a "C" for capsules, and an "F" for flagella in the blanks.

_____a. Give bacteria ability to move

_____b. Surround most bacterial cells

_____c. Resist drying, boiling, and most chemical disinfectants

_____d. Presence or absence aids in identification

_____e. Produced by only a few forms of bacilli; each bacillus forms one spore _____f. Interfere with phagocytosis

_____g. Spore-forming pathogens include the organisms which cause anthrax, botulism, tetanus, and gas gangrene

_____h. Present in about half of the rod forms and all spirilla forms; not present in the coccal forms

_____i. Are inactive, dormant forms, not reproductive forms

_____j. Aid in identification

_____k. Increase virulence of bacteria

10. Describe endotoxins and exotoxins.

a. Endotoxins--____

____

b. Exotoxins--____

____

11. Describe growth factors that influence pathogens.

a. Amount of moisture--____

____

____

b. Amount of food--____

____

____

c. Oxygen--____

____

____

d. Temperature--____

____

____

____

e. pH--____

____

____

f. Light--____

____

g. Effects on neighboring microorganisms--____________________________

____

____

12. Match terms associated with medical asepsis to their correct definitions. Write the correct numbers in the blanks.

_____a. Having the characteristic of destroying bacteria

_____b. Freeing from pathogens by physical or chemical means

_____c. Uncontaminated; relatively free of pathogens

_____d. Inhibiting or retarding bacterial growth

_____e. Free from living microorganisms

_____f. Daily care of all contaminated equipment and utensils

_____g. Invasion of the body by microorganisms

_____h. Transmission of an infection from one person to another

_____i. Infected area known as a *boil*

_____j. Care of utensils and equipment when patient has been dismissed or transferred from a unit

_____k. To make unsterile or unclean by direct contact or exposure

_____l. One transmitted between patients infected with different pathogens

_____m. Communicable; readily transmitted from one person to another, directly or indirectly

_____n. Person who harbors a specific pathogen without any symptoms, but who is potentially capable of spreading the organism to others

1. Bacteriostatic
2. Furuncle
3. Clean
4. Sterile
5. Contagious
6. Direct contact
7. Bactericidal
8. Contaminate
9. Disinfection
10. Infection
11. Cross-infection
12. Concurrent disinfection
13. Terminal disinfection
14. Carrier

_____ o. Association between persons or objects; exposure to pathogenic organisms

_____ p. Limiting movement and social contacts of a carrier or a person with an infection or communicable disease

_____ q. Transmission of a contagious disease by some medium other than direct touch of the infected person

_____ r. Absence of microorganisms which cause infections

_____ s. Restricting movements and social contacts of persons exposed to or having a communicable disease

_____ t. Agent that will prevent the growth or production of microorganisms

_____ u. Presence of pathogens or toxins in the blood or tissues

_____ v. Infection that has been acquired while in the hospital

15. Sepsis
16. Contact
17. Isolation
18. Quarantine
19. Asepsis
20. Indirect contact
21. Antiseptic
22. Nosocomial

13. Discuss ways organisms are spread.

____

____

____

____

14. Describe types of medical asepsis.

a. Aseptic technique--____

____

b. Isolation technique--____

____

c. Reverse or protective isolation technique--____________________________

____

____

15. Select from the following list functions necessary in medical aseptic technique. Mark each correct answer with an "X."

______a. Care promptly for infected areas, such as acne and furuncles

______b. Leave all wounds uncovered so air can dry them out

______c. Keep hands free of cuts and abrasions

______d. Wash hands before, during, and after caring for patient

______e. Keep all equipment on floor away from patient

______f. Clean equipment thoroughly after use

______g. Use a strong disinfectant on hands

______h. Shake all linens well when changing beds to rid them of bacteria

______i. Dispose of soiled dressings, discharges, and body wastes promptly and safely

______j. Keep nails short and clean

______k. Re-use equipment after rinsing with warm water

______l. Remove and handle linens to keep soiled portions to the inside, avoiding contact with clothing and clean articles

______m. Keep patient's unit and utensils clean

16. State rules to remember when using aseptic method to care for equipment and supplies.

a. ____

b. ____

c. ____

d. ____

e. ____

f. ____

17. Describe concurrent and terminal cleaning of a patient's unit.

a. Concurrent--____

____

____

____

____

b. Terminal--____

____

____

____

____

18. Evaluate community resources that protect against harmful microorganisms.

19. Sketch pictures of microorganisms from prepared cultures.

20. Demonstrate the ability to:

    a. Use proper handwashing technique.

    b. Clean a patient unit (terminal).

    (NOTE: If activities 18-20 have not been finished before the test, ask your instructor when they should be completed.)

MICROBIOLOGY, BACTERIOLOGY, AND MEDICAL ASEPSIS
UNIT II

ANSWERS TO TEST

1. a. 3
   b. 7
   c. 11
   d. 2
   e. 6
   f. 5
   g. 8
   h. 4
   i. 12
   j. 10
   k. 1
   l. 9
   m. 13
   n. 16
   o. 20
   p. 14
   q. 22
   r. 18
   s. 21
   t. 15
   u. 17
   v. 19
   w. 23
2. a. Metabolism
   b. Growth
   c. Reproduction
   d. Irritability
   e. Motion
   f. Protection
3. a. Amount of light exposure
   b. Temperature range
   c. Moisture content
   d. Amount of food
   e. Supply of oxygen

4. a. 2
   b. 7
   c. 3
   d. 4
   e. 1
   f. 5
   g. 6

5. a. P
   b. F
   c. F
   d. R
   e. P
   f. F
   g. R
   h. P
   i. R
   j. F

6. a. Smallpox (variola)
   b. Chickenpox (varicella)
   c. Measles (rubeola)
   d. German measles (rubella)
   e. Influenza
   f. Infantile paralysis (poliomyelitis)
   g. Mumps (epidemic parotitis)
   h. Common cold (coryza)
   i. Fever blisters (herpes simplex)
   j. Shingles (herpes zoster)
   k. Rabies

7. a. Roundworm
   b. Pinworm
   c. Hookworm
   d. Flatworm

8. a. Spherical or round forms (coccus or cocci)
    1) Coccus
    2) Diplococci (in pairs)
    3) Streptococci (in chains)
    4) Staphylococci (in clusters)

   b. Bacilli (rod or cylinder shapes)

   c. Spiral or curved forms
    1) Spirilla
    2) Spirochetes
    3) Vibrios

9. a. F
   b. C
   c. S
   d. F
   e. S
   f. C
   g. S
   h. F
   i. S
   j. C
   k. C

10. Descriptions should include:
    a. Remain within the cell until the cell disintegrates
    b. Go out of the intact bacterial cells into the surrounding medium or tissue

11. Description should include:
    a. Amount of moisture
     1) Drying kills some bacteria
     2) Some organisms can stand drying and will activate at a later time

b. Amount of food

  1) Pathogenic organisms require organic food and are either saprophytes or parasites

  2) Pathogens require vitamins and all elements that comprise the bacterial cell

c. Oxygen

  1) Most bacteria require free or atmospheric oxygen (aerobes)

  2) Some bacteria can live without oxygen (anaerobes)

d. Temperature

  1) Hot and cold temperature may kill or reduce growth and metabolic activities, depending on the organism

  2) Heat will destroy most bacteria, but freezing does not always destroy bacteria and may only reduce their activity

e. pH

  1) Bacteria grow best closer to the neutral point or slightly on the alkaline side

  2) Acids and alkalis are harmful to bacteria

f. Light

  1) Sunlight kills most bacteria

  2) Sunlight stimulates spore formation

g. Effects on neighboring microorganisms

  1) Some bacteria are totally independent

  2) Other bacteria depend on their surrounding microorganisms (symbiosis)

12. a. 7
b. 9
c. 3
d. 1
e. 4
f. 12
g. 10
h. 6
i. 2
j. 13
k. 8
l. 11
m. 5
n. 14
o. 16
p. 17
q. 20
r. 19
s. 18
t. 21
u. 15
v. 22

13. Discussion should include:
    a. Organisms can be spread from worker to worker, worker to patient, and from patient to patient
    b. Contaminated equipment can carry harmful microorganisms
14. Descriptions should include:
    a. Aseptic technique--Used in all general nursing care to avoid the spread of microorganisms
    b. Isolation technique--Used in a unit that has a patient with an infection or a contagious disease
    c. Reverse or protective isolation technique--Used in a unit that has a patient with a very low resistance or large open wounds or lesions
15. a, c, d, f, i, j, l, m
16. a. Disposable articles must be discarded in a safe manner
    b. Washable articles must be thoroughly cleaned and disinfected before use by another patient
    c. Metal instruments must be scrubbed and sterilized or disinfected between uses
    d. Rubber goods which are not disposable must be disinfected and dried before storage
    e. Sterile equipment must be stored properly to avoid contamination
    f. Equipment should be used carefully and safely to avoid waste and contamination
17. Descriptions should include:
    a. Concurrent
        1) Place all soiled linens in the place provided for them
        2) Discard all disposable articles and soiled paper products
        3) Clean utensils and return to patient's bedside or storage area
        4) Clean bedside table, bed, and other furniture daily as directed for types of equipment
    b. Terminal
        1) Discard all contaminated articles as directed
        2) Return equipment to proper places after cleaning and disinfecting or sending them to be sterilized

  3) Wash or disinfect unit as directed

  4) Prepare unit for next patient

18. Evaluated to the satisfaction of the instructor

19. Evaluated to the satisfaction of the instructor

20. Performance skills evaluated to the satisfaction of the instructor

INFECTIOUS DISEASE CONTROL AND ISOLATION TECHNIQUE
UNIT III

UNIT OBJECTIVE

After completion of this unit, the student should be able to use knowledge of infectious diseases to prevent the spread of harmful microorganisms. The student should also be able to carry out procedures used in isolation technique. This knowledge will be evidenced by completion of assignment sheet, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the control of infectious diseases to the correct definitions.
2. Distinguish between the origins of infection.
3. Match forms of infections to their correct definitions.
4. List effects of pathogens on tissue.
5. Describe stages of an acute infection.
6. Select from a list factors that influence the occurrence of infection.
7. List ways in which communicable diseases are transmitted.
8. State ways in which transmission of infections can be controlled.
9. Distinguish between methods of controlling organisms inside and outside of the body.
10. Select from a list adverse effects of improper or excessive use of antibiotics and anti-infective drugs.
11. Match terms associated with immunology to the correct definitions.
12. Describe nonspecific types of resistance to disease.
13. Select from a list symptoms of acute inflammation reaction.
14. State the major principles of treatment of acute inflammation.
15. Distinguish between primary and secondary unions in the repair of damaged tissues.
16. Describe types of acquired immunity.

17. Discuss characteristics of an allergy.
18. Describe body reactions that occur in the rejection syndrome.
19. Match terms associated with isolation technique to the correct definitions.
20. Select from a list purposes of isolation technique.
21. Distinguish between isolation techniques used for the various systems.
22. Select from a list general principles of isolation.
23. Describe clothing worn when using isolation technique.
24. State rules to remember when using reverse or protective isolation.
25. State nursing responsibilities to meet the emotional needs of the isolated patient.
26. Complete immunization records.
27. Demonstrate the ability to:
    a. Use proper isolation techniques.
    b. Use double bagging technique.
    c. Put on and remove mask and gown.

INFECTIOUS DISEASE CONTROL AND ISOLATION TECHNIQUE
UNIT III

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

  A. Provide students with objective sheet.

  B. Provide students with information and assignment sheets.

  C. Discuss unit and specific objectives.

  D. Discuss information sheet.

  E. Visit allergy clinic to see what type of tests are available and treatments given.

  F. Visit county health department or have a representative explain to class what type of immunizations are available.

  G. Invite a staff member from the communicable disease control center to discuss types of diseases and their control.

  H. Discuss assignment sheet.

  I. Use hospital procedure manual as basis for isolation technique procedures.

  J. Discuss job sheets and provide equipment needed to complete them.

  K. Have students roleplay the part of an isolated patient.

  L. Give test.

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

  C. Transparency masters

    1. TM 1--Extent of Infections

    2. TM 2--Transmission of Communicable Diseases

    3. TM 3--Transmission of Communicable Diseases (Continued)

    4. TM 4--Transmission of Infection Through Food

    5. TM 5--Transmission of Infection from Food Animals
    6. TM 6--Active Immunity
    7. TM 7--Passive Immunity

D. Assignment Sheet #1--Complete Immunization Records

E. Job sheets

1. Job Sheet #1--Use Proper Isolation Techniques
2. Job Sheet #2--Use Double Bagging Technique
3. Job Sheet #3--Put On and Remove Mask and Gown

F. Test

G. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

B. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1979.

C. *Isolation Techniques for Use in Hospitals.* Department of Health, Education, and Welfare. Atlanta: Public Health Service, 1975.

IV. Films:

A. *Isolation Technique.* Filmstrip available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

B. *Infection Control Series I: Programs 1 to 5.* Available from Concept Media, P.O. Box 19542, Irvine, California 92714.

C. *Infection Control Series II: Programs 5 to 8.* Available from Concept Media, P.O. Box 19542, Irvine, California 92714.

INFECTIOUS DISEASE CONTROL
AND ISOLATION TECHNIQUE
UNIT III

INFORMATION SHEET

I. Terms associated with the control of infectious diseases

A. Epidemiology--Study of the incidence, distribution, and control of infectious diseases

B. Communicable disease--Disease which can be transmitted from one person to another

C. Infectious disease--Disease caused by or capable of being communicated by infection

D. Epidemic--Diseases which affect a large number of people in a community at the same time

E. Endemic--Disease present in a community at all times but occurring in only small numbers of people

F. Pandemic--Widespread epidemic disease

G. Carrier--Person who harbors a specific pathogen without any symptoms, but who is capable of spreading the organism to others

H. Disinfection--Destruction of pathogenic organisms usually by chemical means

I. Disinfectant--Agent that destroys pathogenic organisms

J. Sterilization--Complete destruction of microorganisms and their pathogenic products

K. Antisepsis--Prevention of infection by the inhibition or destruction of the causitive organism

L. Antiseptic--Agent that will prevent the growth and development of microorganisms without necessarily destroying them

M. Asepsis--Free from germs or infection

N. Bacteriostasis--Inhibition of growth of bacteria, usually be chemical means

O. Bactericide--Agent that destroys bacteria

P. Vector--Insect which spreads disease from one host to another

Q. Fomites--Inanimate objects or materials on which pathogens may be conveyed

INFORMATION SHEET

R. Nosocomial--Infection that has been acquired while in the hospital

S. Exacerbation--Increase in the severity of symptoms or disease

T. Quiescent--Causing no trouble or symptoms

U. Infection--Invasion of the body by pathogenic organisms and the reaction of the tissues to them

V. Contaminate--To make unsterile or unclean by contact with the person who has an infectious disease or with articles handled by the infected person

W. Bacteremia--Bacteria in the blood

X. Toxemia--Presence of toxins in the blood

Y. Septicemia--Infection in the blood

(NOTE: This is also called *blood poisoning.*)

Z. Pyemia--Form of septicemia in which multiple abscesses are formed in internal organs

AA. Virulence--Relative power or ability of pathogens to produce disease

II. Origins of infection

A. Opportunist infections

1. Many types of microorganisms are present in the human body and are beneficial to body functions

2. These organisms produce diseases only when given the opportunity to invade body tissues either through injury to skin or when body resistance is low

Example: Escherichia coli is a normal inhabitant of the intestinal tract, but if this tract ruptures or is cut, the e. coli could cause peritonitis, a life-threatening condition

B. True pathogenic infections

1. Organisms which are able to invade tissues of healthy individuals through an inherent power of their own

2. These organisms are transmitted directly from one person to another or from the environment

Examples: Tuberculosis, gonorrhea, infectious hepatitis, rabies, measles, mumps

INFORMATION SHEET

III. Forms of infections (Transparency 1)

(NOTE: Infections can be acute, running a short and severe course, or they can be chronic, running a slow course over a long period of time.)

A. Local--Infection confined to one spot or area

Example: Abscess

B. Focal--Localized infection in which organisms leave the infected area and travel to other parts of the body

Examples: Abscessed teeth, infected tonsils

C. Systemic--Infection involving the whole body

Example: Syphilis

(NOTE: Microorganisms and toxins are frequently carried by the blood and lymph from one part of the body to another.)

D. Primary--First or original infection

Example: Primary site of cancer later moves to other areas

E. Secondary--Infection which follows or complicates the original disease

(NOTE: This type of infection is usually caused by opportunist organisms.)

F. Latent--Inactive or hidden infection that may show symptoms at a later date

Examples: Early tuberculosis, tertiary syphilis, undulant fever, malaria

G. Mixed--Infection caused by more than one organism

Examples: Appendicitis, wound infections, Vincent's angina (trench mouth)

IV. Effects of pathogens on tissue

A. Mechanical injury

Examples: Malaria organisms may block capillaries in the brain; filaria organisms may block lymph vessels, causing elephantiasis

B. Destruction of body cells or tissues

Examples: Some organisms such as beta hemolytic streptococci cause hemolysis or rupture of red blood cells

INFORMATION SHEET

C. Injury by toxins

Examples: Endotoxins usually produce general effects, such as fever; exotoxins produce specific effects, such as nerve damage

V. Stages of an acute infection

A. Incubation--Period between entrance of organisms to the body and onset of symptoms

(NOTE: Length of incubation period varies with diseases.)

B. Prodromal--Short period, usually a day or less, when symptoms are vague or cause only mild discomfort

C. Acute--Period of actual illness; symptoms, degree of fever, and length of time depend upon the disease, condition of patient, and treatment

D. Convalescent--Begins with decline of fever and acute symptoms; length of time depends upon the severity of the acute stage, treatment, and general health of the patient

VI. Factors that influence the occurrence of infection

A. Portal of entry

(NOTE: The way in which the pathogen enters the body determines whether the disease will occur. Most organisms cause infection only when they enter certain pathways.)

Examples: Organisms which cause gonorrhea will infect only the mucous membranes of the genitourinary tract or the eyes; if swallowed, they will not cause gonorrhea

B. Number of organisms

(NOTE: The normal body defenses can usually control a few organisms and, in diseases where the pathogen has a low virulence, it takes a large number to cause an infection.)

C. Virulence

(NOTE: Some pathogens are more virulent than others.)

D. Resistance of the person

VII. Ways in which communicable diseases are transmitted (Transparencies 2, 3, 4, and 5)

A. Airborne

Examples: Spread through dust or droplet particles in the air; many times, in crowded living or working conditions with close contact, more respiratory infections are seen

INFORMATION SHEET

B. Direct personal contact

Examples: Spread by actually touching an infected person or articles that he or she has touched

C. Vehicle

Examples: Contaminated food, water, or medicine; blood transfusion from an infected person

D. Vector

Examples: Some species of ticks transmit Rocky Mountain spotted fever; anopheles mosquitos transmit malaria

E. Animals

Examples: Domestic or wild animal bites can transmit rabies; eating wild animals, such as rabbits with tularemia, or drinking milk from cows with undulant fever

F. Fomites

Examples: Doorknobs, pencils, toys, clothing, bedding, and other articles that have been contaminated by an infected person

VIII. Ways in which transmission of infections can be controlled

A. Protect all portals of entry

Examples: Bandage wounds, wear mask over nose and mouth, wash hands frequently

B. Protect all portals of exit

Examples: Wear mask over nose and mouth; handle feces, urine, or other excretions and contaminated articles, such as linens, dishes, and dressings, properly

C. Prevent exposure to vectors or carriers of infection

Examples: Dust control, proper cooking of food, disinfection or sterilization of all fomites, vaccination of pets

IX. Methods of controlling organisms inside and outside of the body

A. Inside

1. Get available immunizations for long-lasting immunity
2. Use immediate protection with temporary immunity of gamma globulin and antitoxins if exposed to an infectious disease

INFORMATION SHEET

3. Use anti-infective and antibiotic drugs to treat infectious diseases

4. Treat symptomatically

   (NOTE: Many illnesses have no specific drugs for treatment, such as viruses. Fever may be treated by medications, and bed rest may be ordered.)

B. Outside

1. Promote bacteriostasis in food by proper freezing and canning

   (NOTE: This process does not kill the bacteria but does inhibit its growth.)

2. Control pollution

   Examples: Air, water, waste materials

3. Destroy microorganisms

   Examples: Use of chemical agents, heat, radiation to destroy bacteria

X. Adverse effects of improper or excessive use of antibiotics and anti-infective drugs

(NOTE: Antibiotics and anti-infective drugs can have beneficial effects when properly used, but improper or excessive use may produce serious side effects.)

A. Allergy to drugs may develop

B. Normal flora of body may be upset or destroyed with resulting abnormal overgrowth of some organisms

C. Organism may become resistant to drug

D. Toxic side effects may occur with prolonged use

XI. Terms associated with immunology

A. Immunology--Study of resistance to disease

B. Immunity--Resistance to disease

   (NOTE: There are two types of immunity to disease. The nonspecific resistance is an inborn immunity, and the specific resistance is an acquired immunity.)

C. Antigen--Any substance which stimulates the formation of antibodies when introduced into the body

INFORMATION SHEET

D. Antibody--Protein substance developed by the body in response to the presence of an antigen

E. Allergy--Abnormal hypersensitivity to one or more substances

F. Allergen–Substance capable of producing hypersensitivity

G. Edema--Local or generalized condition in which the body tissues retain tissue fluid

XII. Nonspecific types of resistance to disease

A. Species resistance--One species of animals is resistant to diseases which afflict another species

Examples: Humans contract only a few diseases which are common in lower species; lower animals do not contract many diseases of humans; gonorrhea and syphilis are diseases of humans only

B. Racial or group resistance

1. Certain races or groups have resistance to some diseases to which other groups are highly susceptible
2. When a disease organism is first introduced into a group or race, it is very virulent
3. Continued exposure to a certain disease gradually increases the group's immunity

Examples: American Indians were very susceptible to smallpox; Mexicans seem to have a natural immunity to some intestinal infections

C. Individual resistance

1. Sometimes referred to as *genetic* or *inherited* resistance
2. Individual resistance may vary from time to time
3. Other conditions such as malnutrition, alcoholism, fatigue, or stress affect individual resistance

D. Mechanical and chemical barriers

1. Unbroken skin or mucous membranes protect from disease
2. Lacrimal secretions are somewhat bactericidal
3. Cilia and mucous membranes protect air passages
4. Gastrointestinal tract is protected somewhat by gastric secretions

INFORMATION SHEET

E. Phagocytosis

   1. Is method by which white blood cells ward off infections

   2. Helps to limit focus of infection

F. Inflammation response or reaction

   1. Most important of all the nonspecific resistances

   2. Living body tissue responds to irritation or injury by inflammation of area affected

      (NOTE: Suffix *-itis* indicates inflammation.)

XIII. Symptoms of acute inflammation reaction

   A. Redness

   B. Heat

   C. Edema

   D. Pain

   E. Loss of function

XIV. Major principles of treatment of acute inflammation

   A. Rest for inflamed area to prevent spread of pathogens and increase of inflammation

   B. Application of heat to dilate blood vessels that increase the flow of blood, white cells, and antibodies to the affected area

   C. Opening areas for drainage to let bacteria escape and to relieve tension and swelling of inflamed area

   D. Taking appropriate antibiotics to supplement the body's natural defenses to fight the inflammation

XV. Primary and secondary unions in the repair of damaged tissues

   A. Primary union

      1. Healing of a clean, closed wound

      2. Occurs in a short period of time

INFORMATION SHEET

B. Secondary union

1. Healing of a large, gaping, or irregular wound

2. Takes a longer period of time

(NOTE: When the wound is large or irregular so that the walls cannot be brought together, the gap is filled in with granulation tissues composed of capillaries and fibroblasts.)

XVI. Types of acquired immunity (Transparencies 6 and 7; Assignment Sheet #1)

A. Active

(NOTE: Immunization records should be current.)

1. Produced when antigens, either microorganisms or exotoxins, are introduced into the body, causing it to produce specific antibodies

2. May last for years or a lifetime

Example: Active acquired immunity may be produced by having the disease or by vaccination

B. Passive

1. Produced when antibodies or antitoxins developed by another person or animal are introduced into the body

2. May be temporary

Examples: Passive immunity may be produced by antibodies transferred from mother to fetus, by injection of gamma globulin, or by injection of antitoxins

XVII. Characteristics of an allergy

A. Cannot occur on first contact with potential allergen because antibodies have not been produced

B. Allergens produce antigen-antibody reaction within the cells of the sensitized tissues

(NOTE: This reaction may be accompanied by irritation, edema, or other symptoms.)

C. Some allergic disorders are associated with emotional disturbances

D. Treatment may include avoiding the allergen, desensitization, or antihistamines

(NOTE: Allergy clinics are available for testing to determine substances to which a person is sensitive. He or she may then be placed on a schedule of medication to desensitize and/or treat allergy.)

INFORMATION SHEET

E. Allergens include pollen, dust, foods, cosmetics, dyes, bee stings, animal fur, and various drugs

XVIII. Body reactions that occur in the rejection syndrome

(NOTE: The rejection syndrome may occur following transplantation of an organ or tissue.)

A. Type of antigen-antibody reaction occurs within the body

B. Every organism has a natural tendency to reject foreign substances, especially tissues from another person or animal

C. Tissues or organs to be transplanted must be cross-matched in the same way that blood is matched for transfusion

D. Drugs that suppress antibody formation are used to decrease tissue rejection

XIX. Terms associated with isolation technique and their definitions

A. Contaminated--Exposed to pathogenic organisms

(NOTE: Contaminated articles may appear clean but still be very infective after contact with a diseased person.)

B. Isolation--Separation of persons having an infection or contagious disease from others; separation of contaminated articles

C. Isolation technique--Nursing care procedures to prevent the spread of an infection or contagious disease from one person to another

(NOTE: The best way to prevent disease from spreading is to isolate the patient and everything that is contacted, to destroy all the organisms that leave the patient's body, and to not carry the bacteria from one patient to another.)

D. Disinfection--Killing of pathogenic organisms by chemical or physical means; commonly used on inanimate objects

E. Dysentery--Inflammation of the intestine, particularly the colon, due to varied causes; characterized by abdominal pain, tenesmus, and diarrhea with blood or mucus

F. Infectious hepatitis--Acute, infectious, inflammatory disease of the liver caused by a virus; transmitted orally; may be epidemic

G. Serum hepatitis--Form of viral hepatitis transmitted by the parenteral injection of human blood or blood products contaminated with the hepatitis virus

INFORMATION SHEET

H. Excreta--Waste material cast off by the body

I. Vesicle--Small blister filled with fluid

J. Bulla--Large blister filled with fluid

K. Necrosis--Pathological death of a cell or group of cells in contact with living tissue

L. Gangrene--Necrosis of a part due to failure of blood supply, to disease, or to injury

M. Gas gangrene--Form of gangrene occurring in massive wounds; caused by anaerobic bacilli; characterized by high fever, offensive purulent discharge, and presence of gas bubbles in the tissues

N. Concurrent disinfection--Disinfection carried on daily or as often as necessary in patient care

O. Terminal disinfection--Care of the patient's unit and belongings after the infectious period has ended or when articles are removed from the unit

P. Reverse or protective isolation technique--Modified surgical asepsis to prevent the introduction of disease-producing organisms into a patient's unit

XX. Purposes of isolation technique

A. Remove patient from source of infection

B. Protect patient from contracting another disease or infection

C. Protect other patients and personnel

D. Provide safe disposal or disinfection of equipment and supplies

XXI. Isolation techniques used for the various systems

(NOTE: Isolation techniques vary with each institution. Understand and follow methods written in hospital procedure manual.)

A. Wound and skin precautions

(NOTE: These rules must be followed to prevent contact with an open wound or exudate containing the pathogen.)

1. Private room is desirable

2. Gown must be worn by anyone having direct contact with infected wound

(NOTE: Masks are not necessary except during dressing changes; hands should be washed upon entering and leaving room.)

INFORMATION SHEET

3. Gloves must be worn by all persons having direct contact with the infected area

4. All disposable items must be eliminated according to hospital policy; any reusable articles should be bagged and sterilized in proper manner

B. Respiratory precautions

(NOTE: Diseases such as diphtheria, tuberculosis, measles, and mumps may be spread by coughing, sneezing, or talking.)

1. Private room is necessary and door *must* be kept closed

2. Gowns are not necessary but masks must be worn by those entering room or worn by method required by hospital policy

   (NOTE: Gloves are not necessary but hands should be washed thoroughly.)

3. All articles taken from the room must be disinfected or disposed of properly

4. Oral and nasal discharges must be disposed of by method required by hospital policy

C. Enteric precautions

(NOTE: Salmonella, typhoid, various types of dysentery, infectious hepatitis, and some types of diarrhea are contagious.)

1. Private room is necessary for children only

2. Gowns must be worn by all persons who have direct contact with patient

3. Masks are not usually necessary

4. Hands must be washed upon entering and leaving room

5. All items taken from the room must be disinfected according to the contaminating organisms

6. Gloves must be worn by all persons having direct contact with patient or with articles contaminated with fecal material

7. Excreta should be disposed of according to hospital policy

INFORMATION SHEET

D. Blood and serum precautions

(NOTE: Malaria and viral hepatitis, type A, B, or unspecified, can be spread by contaminated needles or mosquito bites.)

1. Syringes and needles must be disposed of properly or disinfected when taken from the unit
2. Any dressing with drainage from wounds should be disposed of properly

XXII. General principles of isolation (Job Sheets #1 and #2)

A. Each nurse is responsible for learning about and maintaining isolation procedures used in facility where he or she works

B. Isolation technique is effective only when each worker knows and follows the procedures exactly

C. Frequent handwashing is the most important rule to follow

D. Equipment should be kept to a minimum

E. Anything taken from the unit should be disinfected, sterilized, or burned

F. Articles that cannot be sterilized or soaked in disinfectant should be washed or wiped off with disinfectant and aired for 12 hours

Example: Stethoscopes

G. Books, magazines, and newspapers should be burned

H. Nursing care should be planned to provide all equipment needed and avoid unnecessary trips in and out of unit

I. Procedures such as double bagging of disposable items must be done with two persons, one remaining inside the room and one outside the room

J. Isolation units should be properly identified

K. All items removed from the isolation unit must be labeled **ISOLATION**

XXIII. Clothing worn when using isolation technique (Job Sheet #3)

A. Mask

1. May be made from cloth or disposable paper
2. Must be changed frequently according to type used

(NOTE: If the mask becomes wet, it is no longer effective.)

INFORMATION SHEET

3. Should be removed and discarded or placed in a soiled linen receptacle when not in use

   (NOTE: **DO NOT** wear the mask as a necklace and then put it back on; it defeats the purpose of wearing a face covering.)

4. Make sure mask completely covers mouth and nose

B. Gowns

1. May be made from cloth or disposable paper

2. Cloth gowns may be used more than once if removed and put on properly, following a strict routine

3. Insides of gowns, fasteners, neckband, and surrounding areas are uncontaminated

4. Scrub gowns may be worn in place of the uniform in some isolation units

   (NOTE: These are types of clothes worn in surgery and are never worn out of the isolation area, but are placed in proper receptacles.)

5. If in doubt of a gown's cleanliness, discard and select another one

C. Gloves

1. Clean gloves may need to be worn when doing some procedures; others may call for sterile gloves

   (NOTE: Although gloves may be worn and discarded, good handwashing must be done before and after removal of the gown and the mask.)

2. Nurse should remove jewelry and place in pocket before putting on gloves

D. Shoes

1. Disposable shoes as worn in surgery must be worn over regular shoes

2. If the disposable shoes are not available, a mat treated with disinfectant should be placed at the exit from the unit for cleaning the shoe soles

E. Caps

1. May be made from cloth or paper

2. Must cover ALL of hair to be effective

INFORMATION SHEET

XXIV. Rules to remember when using reverse or protective isolation

A. Doors to the unit are kept closed at all times

B. All persons must scrub and wear sterile or clean mask, gown, cap, and gloves while providing care

C. All equipment to be taken into unit is sterilized

D. Books, magazines, and newspapers are sterilized in hot air for one hour at 300°F (150°C)

E. Disposable or sterile food containers and utensils are used

F. Concurrent disinfection is carried out at least once daily

XXV. Nursing responsibilities to meet the emotional needs of the isolated patient

A. Explain isolation to patient and family

Examples: Reasons why patient must be isolated, how it is carried out and how they can help, what articles are permitted in the room, and disinfection for articles on removal

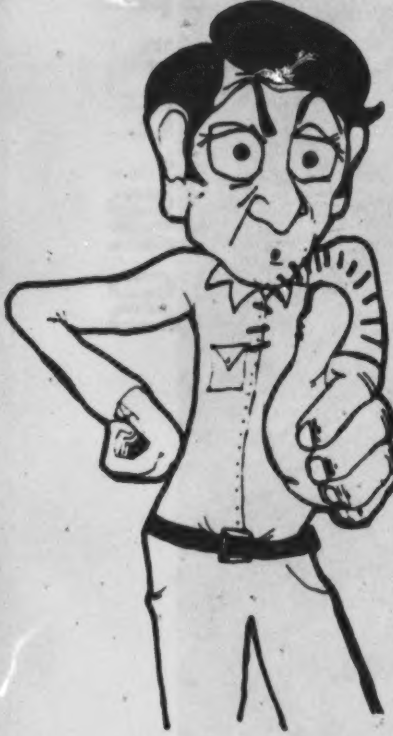
B. Provide reassurance and emotional support

C. Check the patient frequently to keep him or her from feeling neglected or lonely

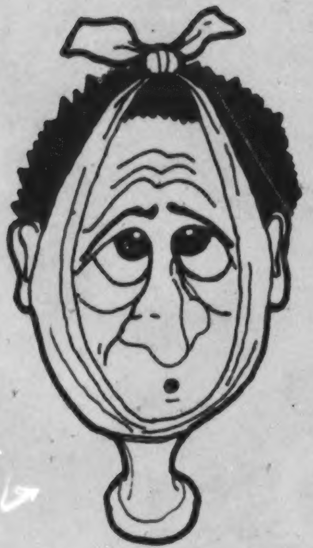
D. Provide diversions for the patient since he or she will be alone much of the time

(NOTE: Radio, TV, and reading material can be provided.)

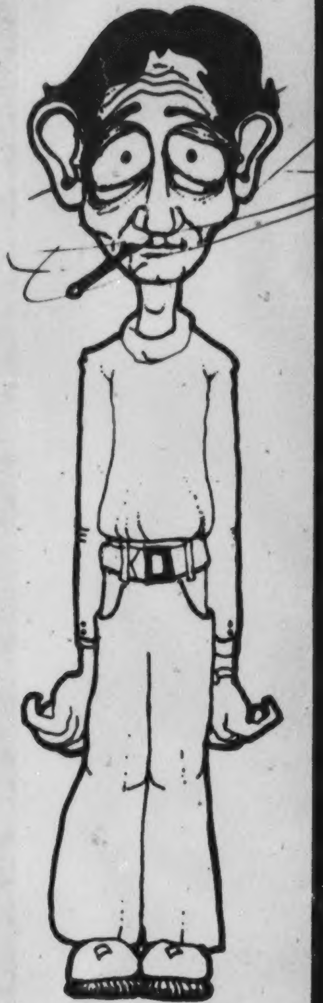
Extent of Infections



Local

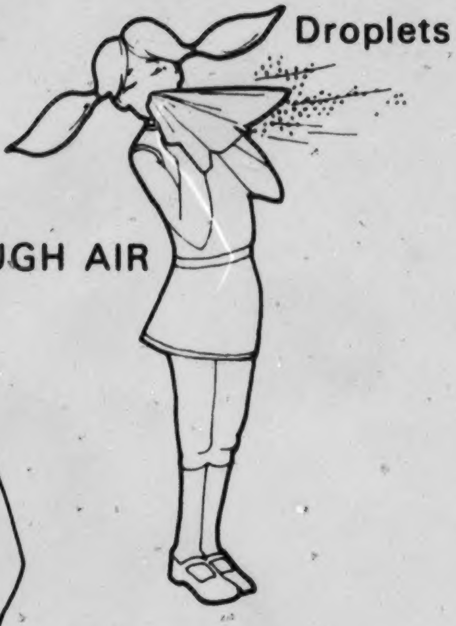


Focal

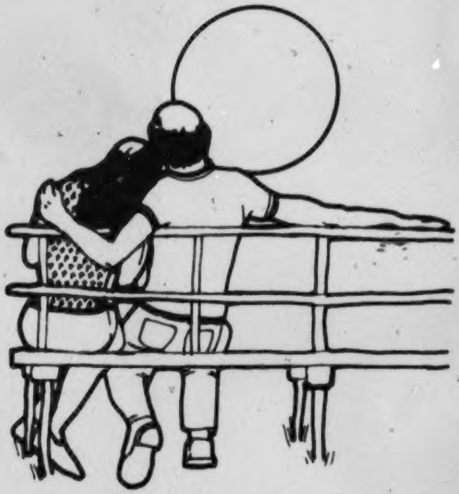


Systemic

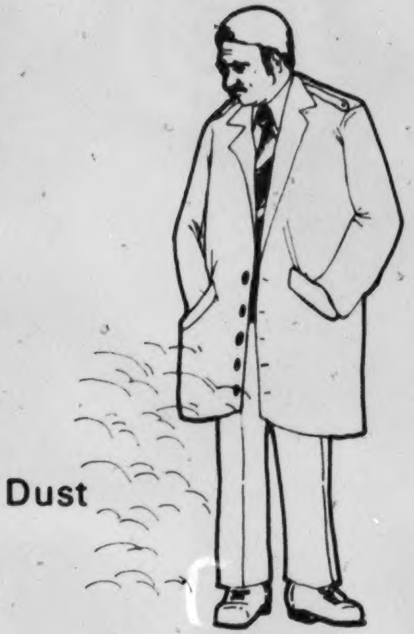
Transmission of Communicable Diseases

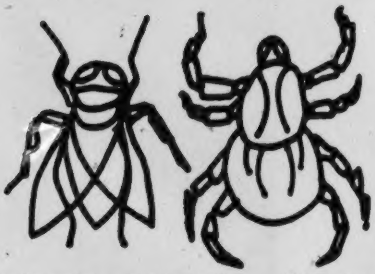


THROUGH AIR



DIRECT CONTACT

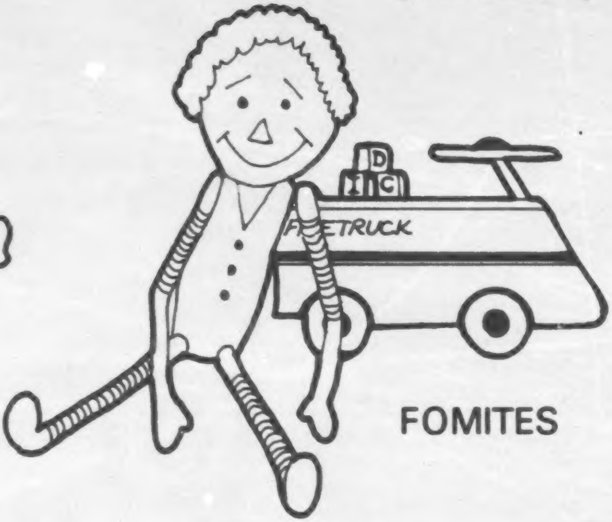




INSECTS, MITES, AND TICKS

Transmission of Communicable Diseases

(Continued)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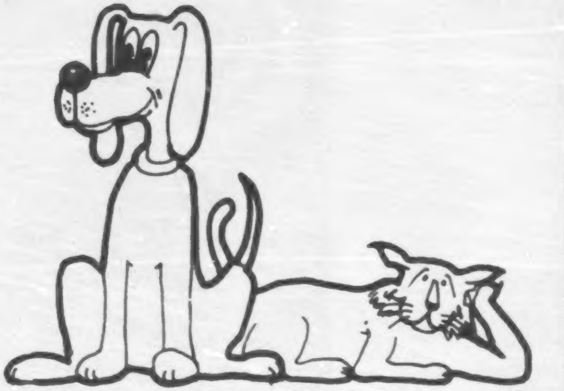
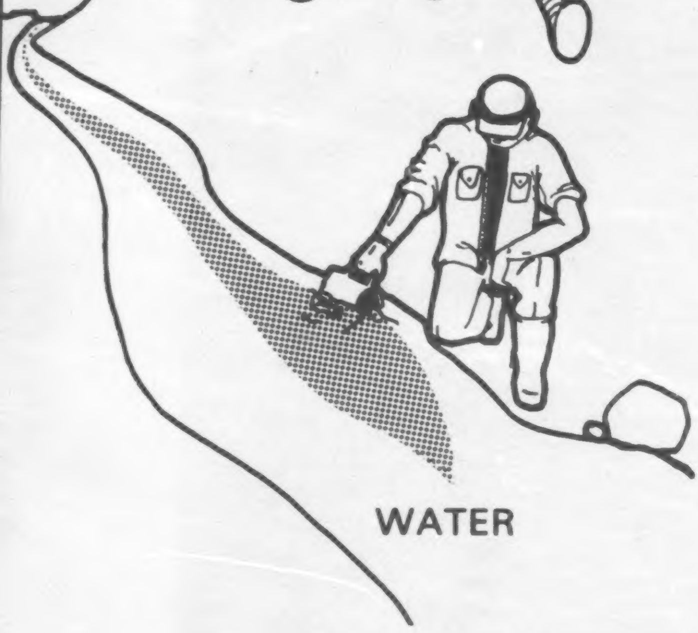
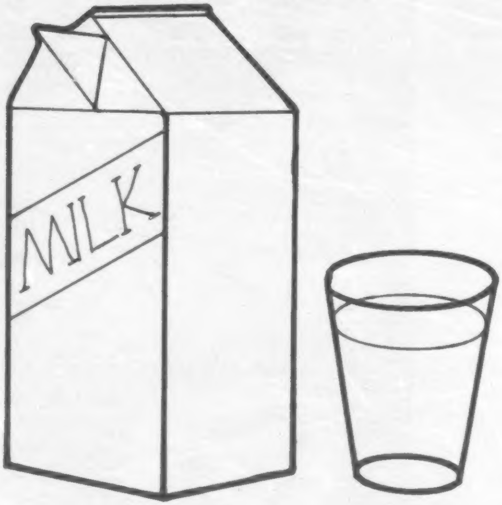
FOMITES



ANIMAL DISEASE TO HUMAN

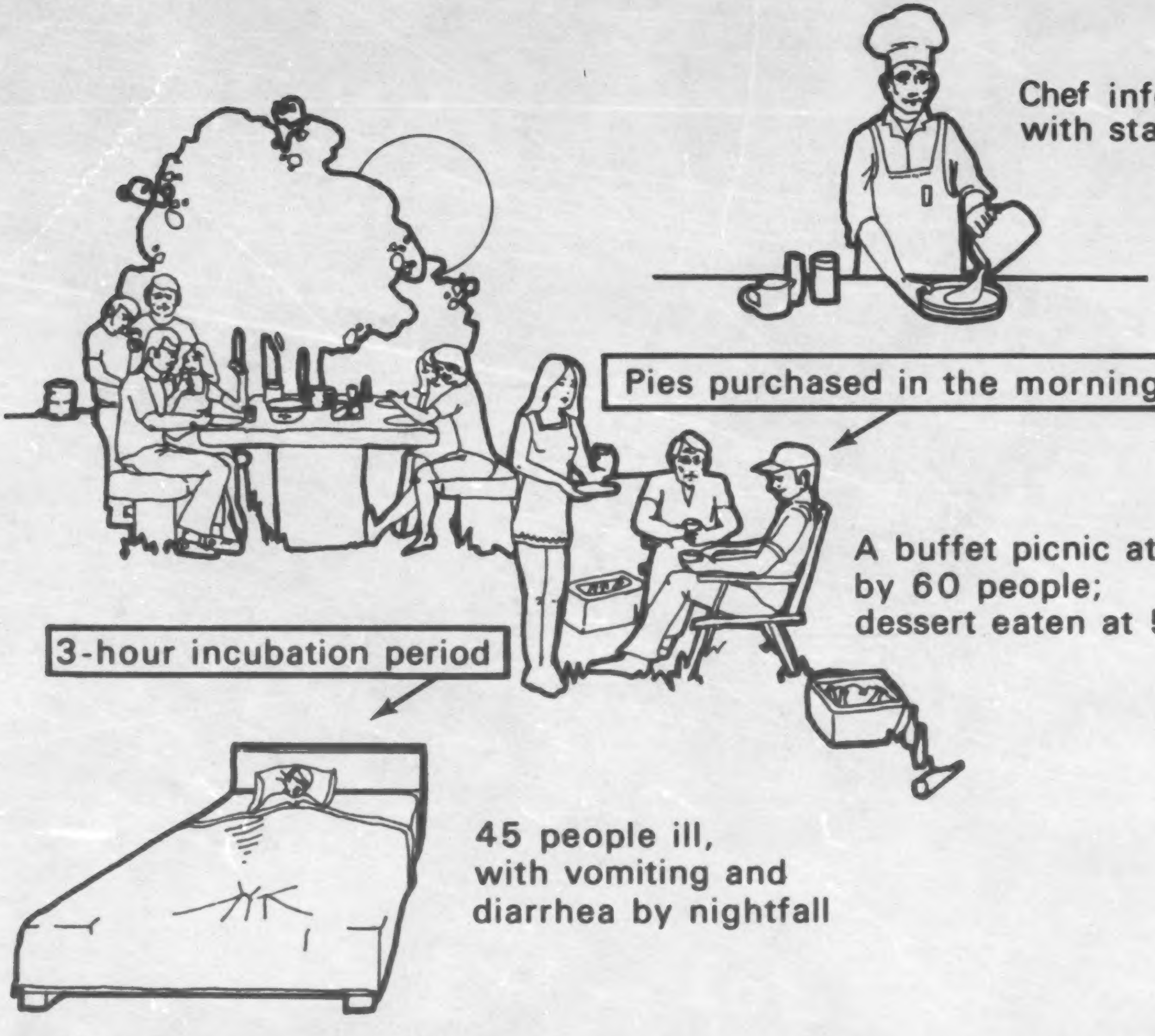


WATER



FOOD

Transmission of Infection Through Food



Chef infected
with staphylococci

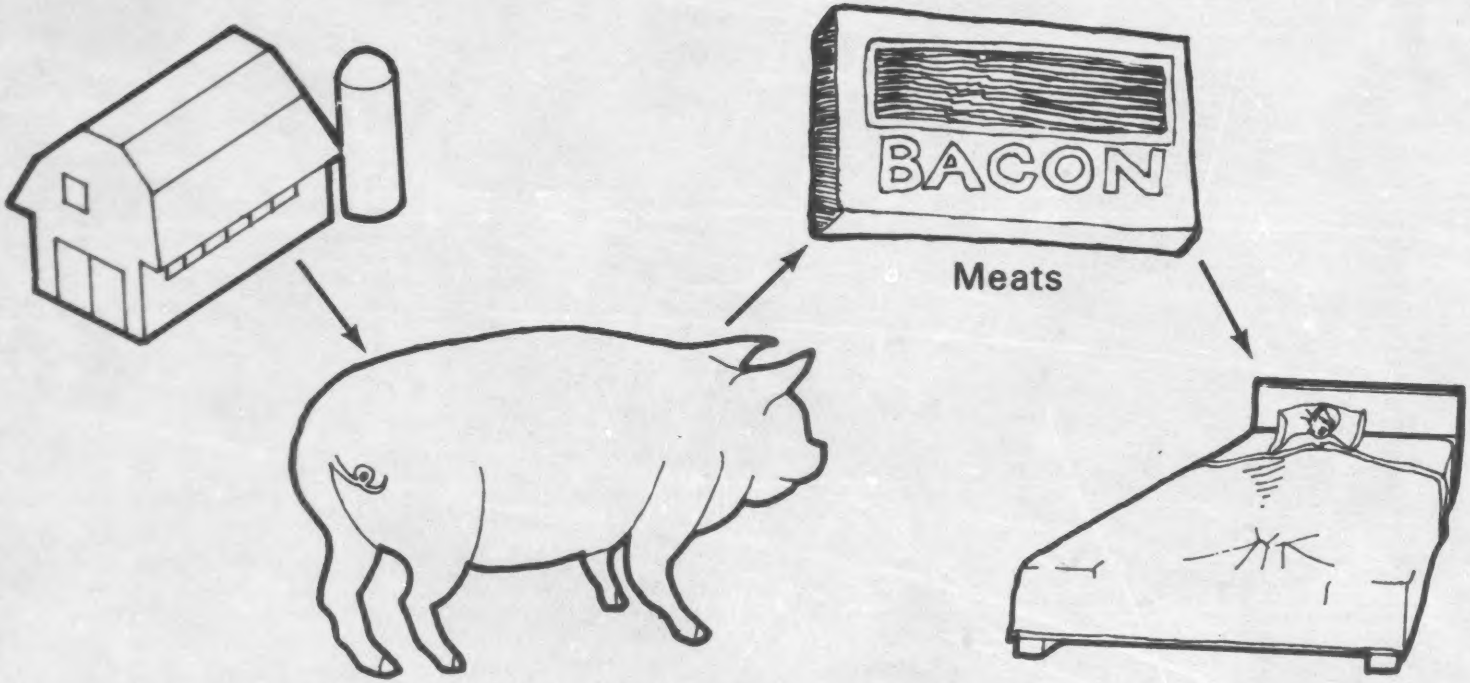
Pies purchased in the morning

A buffet picnic attended
by 60 people;
dessert eaten at 5 PM

3-hour incubation period

45 people ill,
with vomiting and
diarrhea by nightfall

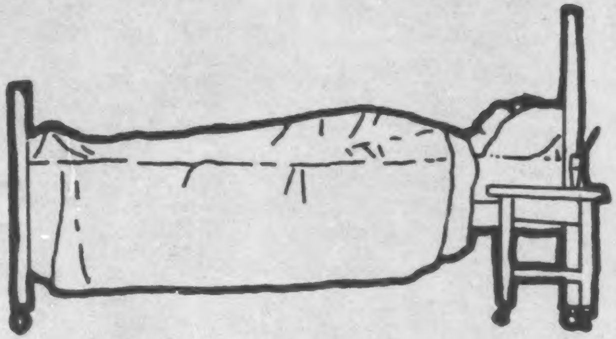
Transmission of Infection from Food Animals



Meats

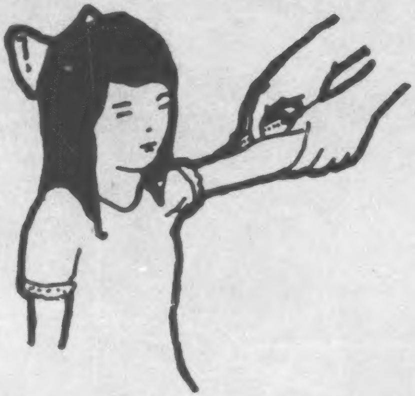
Ingestion by humans

Active Immunity



Person Becomes Ill with Disease, Manufactures Antibodies. Immunity Lasts.

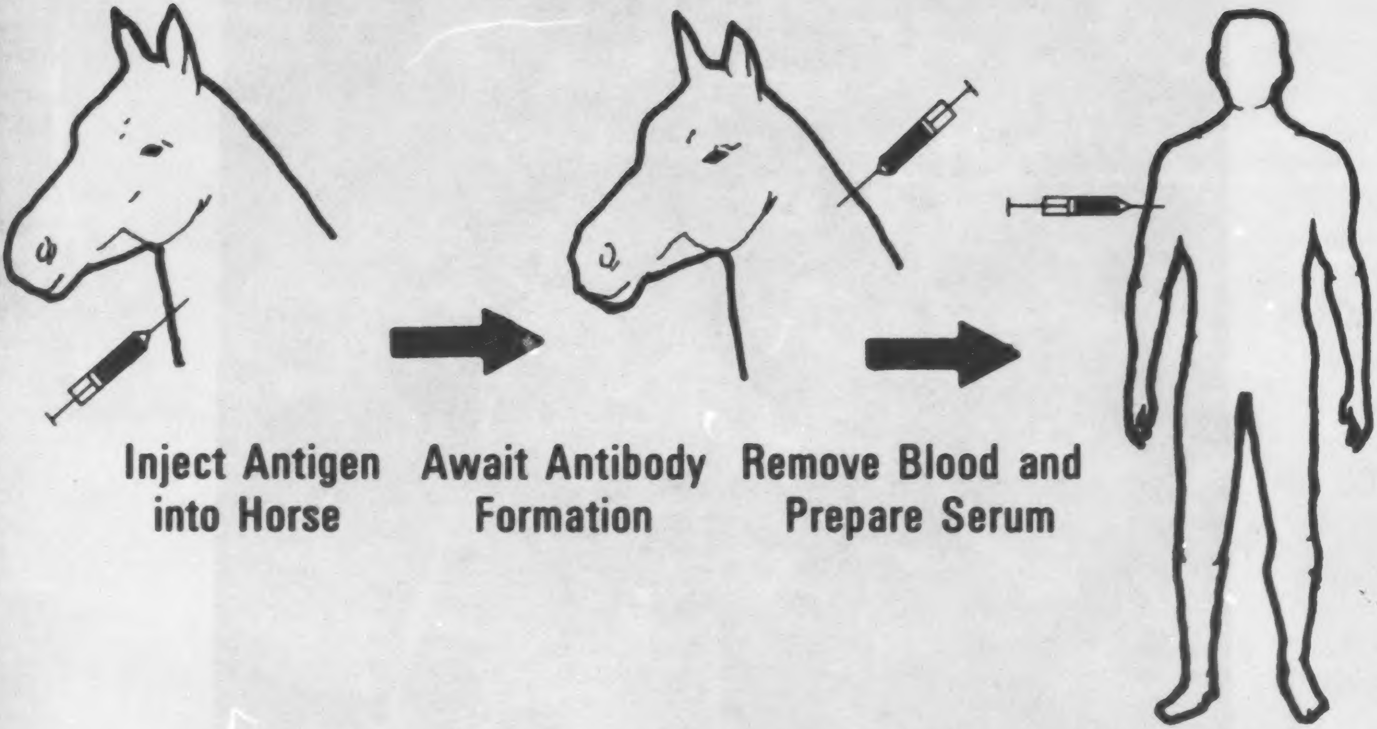
OR



Person Is Vaccinated or Innoculated.

Person Produces Own Antibodies. Immunity Lasts for Months or Years.

Passive Immunity



Inject Antigen into Horse

Await Antibody Formation

Remove Blood and Prepare Serum

Inject Serum into Person

INFECTIOUS DISEASE CONTROL
AND ISOLATION TECHNIQUE
UNIT III

ASSIGNMENT SHEET #1--COMPLETE IMMUNIZATION RECORDS

NAME ______________________________ SCORE ______________

Science has given the world the opportunity to prevent many deadly diseases by developing immunizations and vaccines. Small children should be given these immunizations at an early age and adults should keep their immunizations current by having boosters at various intervals. In today's mobile society, accurate records should be kept and carried to new homes and physicians. As a nurse it is important for you to know how to fill out these records and to instruct patients on how to keep a home record for all of the family. Using your own immunization information, fill out the following sample records. Maybe this would be a good time for you to update your own protection against disease.

RECORD GIVEN TO PARENT OR PATIENT

PRIMARY IMMUNIZATIONS

Age	Vaccines	Comments
2 Months	DTP & Polio	DTP--0.5 ml Diphtheria, Pertussis and Tetanus (Absorbed Type) administered intramuscularly
4 Months	DTP & Polio	Polio--Trivalent Oral Polio Vaccine (TOPV)
6 Months	DTP & Polio	
15 Months	Measles Rubella (Mumps)	M-R--One dose (0.5 ml) of Measles/Rubella combined, administered subcutaneously OR M-M-R--One dose of Measles/Mumps/Rubella combined, administered subcutaneously
18 Months	DTP & Polio	These doses are considered to be an integral part of the primary immunization series

BOOSTER IMMUNIZATIONS

6 Years	DTP & Polio	Should be given prior to school entry. Substitute 0.5 ml Td (Adult Strength) for children age seven and above
Every 10 Years	Td (Adult)	0.5 ml Td (Adult Strength) should be given intramuscularly at 10-year intervals to persons age seven and above

ASSIGNMENT SHEET #1

RECORD KEPT IN COUNTY HEALTH DEPARTMENT OR PHYSICIAN'S OFFICE

NAME ______________________ BIRTHDATE _______ PARENTS ____________

ADDRESS _________________________ CITY __________ COUNTY __________

I have read the Oklahoma State Department of Health information forms about Polio (Live & Killed) February 1977, Measles, Mumps, Rubella, DTP, Td Vaccines. I have had a chance to ask questions which were answered to my satisfaction. I believe I understand the benefits and risks of these vaccines and request that they be given to me or the person named for whom I am authorized to make this request.

Vaccine	Signature Parent/Guardian	Given			MFG-Lot No.
		Date	Site	By	
POLIO-Dose 1					
POLIO-Dose 2					
POLIO-Dose 3					
POLIO-Dose 4					
POLIO-Dose 5					
DTP-Dose 1					
DTP-Dose 2					
DTP-Dose 3					
DTP-Dose 4					
DTP-Dose 5					
Td-Dose 1					
Td-Dose 2					
Td-Dose 3					
Td-Dose 4					
Td-Dose 5					
Measles					
Rubella					
Mumps					

IMMUNIZATION REGISTRATION RECORD

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ASSIGNMENT SHEET #1

PRIMARY IMMUNIZATIONS

Vaccine	Date Given	Signature	Vaccine	Date Given	Signature
DTP-Dose 1			Polio-Dose 1		
DTP-Dose 2			Polio-Dose 2		
DTP-Dose 3			Polio-Dose 3		
Measles			Polio-Dose 4		
Rubella			Oklahoma Law requires no less than 3 DTP, one Measles, one Rubella and 4 Polio immunizations before school entry		
Mumps					

BOOSTER IMMUNIZATIONS

DTP-Dose 4			Polio-Dose 5		
DTP-Dose 5			*		
Td-(Adult)			*		
Td-(Adult)			*		

DTP--Diphtheria-Pertussis-Tetanus

Td--Diphtheria-Tetanus

*Other Vaccine or Test

INFECTIOUS DISEASE CONTROL
AND ISOLATION TECHNIQUE
UNIT III

JOB SHEET #1--USE PROPER ISOLATION TECHNIQUES

I. Equipment

  A. Bags for double bagging and labels

  B. Receptacle for soiled linen

  C. Bedside equipment: bedpan, urinal, kidney basin, soap dish, drinking glass, water pitcher

  D. Masks and gowns

  E. Linens for unit

II. Procedure

  A. Linen

    1. Carry only needed linen into unit

    2. Keep receptacle for soiled linen in unit

    3. Put linens in double bags and label when removing linens from unit

    (NOTE: Most linens can be disinfected by usual laundering process but if contaminated by spore-forming organisms, they should be sterilized.)

    4. Place disposable linens with other disposables in bags

  B. Food utensils--Discard disposable settings

  C. Bedpans, urinals, and excreta--Empty immediately and disinfect with solution used in that particular facility

  D. Equipment such as suction devices, flotation pads, and oxygen equipment--Label and disinfect as required

  E. Other body discharges

    1. Double bag discharges on tissues from eyes, nose and mouth, and contaminated dressings

JOB SHEET #1

  2. Dispose of immediately according to facility's method

F. Sending specimens to laboratory

  1. Keep outside of specimen container clean or transfer to clean container
  2. Label and bag specimens outside unit before taking to lab

G. Taking vital signs

  1. Leave equipment needed inside unit; if necessary to remove, disinfect before removing
  2. Use a wall clock with second hand, if possible
  3. Protect your watch by placing it on a clean paper towel or in plastic bag

H. Transporting patients to other areas of hospital

  1. Have patient wear clean gown and mask
  2. Drape wheelchair or stretcher with a clean blanket
  3. Wrap patient in blanket, leaving face uncovered
  4. Tell department what type of infection the patient has so proper precautions can be taken

I. Care of body after death

  1. Care for body as usual, then wrap in shroud
  2. Drape stretcher with clean shroud
  3. Transfer body to stretcher

     (NOTE: Outside the unit a clean person wraps the body, touching only outside of clean shroud.)

  4. Label so the pathologist or mortician will know what kind of isolation was carried out
  5. Transport

     (NOTE: Each institution has its own procedure to carry out in case of death.)

JOB SHEET #1

III. Checklist for using proper isolation techniques

	Performed well	Needs improvement
A. Gathered needed equipment and brought to unit	☐	☐
Comments: ______________________		
B. Brought only needed linens into unit	☐	☐
Comments: ______________________		
C. Kept soiled linen receptacle within unit	☐	☐
Comments: ______________________		
D. Put linens in double bags and labeled correctly when removing from unit	☐	☐
Comments: ______________________		
E. Placed disposable linens properly in bags with other disposables	☐	☐
Comments: ______________________		

JOB SHEET #1

	Performed well	Needs improvement
F. Discarded disposable food utensils properly	☐	☐
Comments: ______________________________		
G. Emptied promptly and disinfected correctly bedpans, urinals, and excreta	☐	☐
Comments: ______________________________		
H. Labeled and disinfected correctly equipment such as suction devices, flotation pads, and oxygen equipment	☐	☐
Comments: ______________________________		
I. Double bagged properly and disposed of promptly discharges on tissues from eyes, nose, mouth, and contaminated dressings	☐	☐
Comments: ______________________________		
J. Kept outside of specimen container clean or transferred to clean container	☐	☐
Comments: ______________________________		

JOB SHEET #1

		Performed well	Needs improvement
K.	Labeled and bagged specimens correctly outside unit before taking to lab	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
L.	Left equipment needed inside unit, or disinfected properly if necessary to remove equipment from unit	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
M.	Used a wall clock with a second hand, if possible, when taking vital signs	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
N.	Protected watch by placing it on a clean paper towel or in a plastic bag	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
O.	Had patient wear clean gown and mask when patient was moved to another area of the hospital	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		

JOB SHEET #1

		Performed well	Needs improvement
P.	Draped wheelchair or stretcher with a clean blanket	☐	☐
	Comments:		
Q.	Wrapped patient in a blanket, leaving face uncovered	☐	☐
	Comments:		
R.	Told department what type of infection the patient had so that proper precautions could be taken	☐	☐
	Comments:		
S.	Cared for body properly after death and wrapped body in shroud	☐	☐
	Comments:		
T.	Draped stretcher with clean shroud and transferred body to stretcher	☐	☐
	Comments:		

JOB SHEET #1

	Performed well	Needs improvement
U. Labeled body correctly so pathologist or mortician would know what kind of isolation was carried out	☐	☐

Comments: ____

____

____

	Performed well	Needs improvement
V. Transported body properly	☐	☐

Comments: ____

____

____

INFECTIOUS DISEASE CONTROL
AND ISOLATION TECHNIQUE
UNIT III

JOB SHEET #2--USE DOUBLE BAGGING TECHNIQUE

I. Equipment

A. Plastic bags inside isolation room

B. Other plastic bags, usually large and red

C. Secure fastener, tapes, or ties

D. Tape or labels

E. Marking pens

II. Procedure

(NOTE: Ask someone to help you. You stay outside the unit to remain clean; the second person works inside the unit.)

A. Hold wide open a clean, cuffed bag at entrance to unit

B. Have person inside unit place bagged items from the unit inside clean bag

C. Fold over top of bag and fasten it

D. Label bags

(NOTE: Label contents in several places with letters large enough to be read easily.)

Examples: Contents, room number, type of isolation

E. Take bags to proper disposal or unit area

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JOB SHEET #2

III. Checklist for using double bagging technique

	Performed well	Needs improvement
A. Gathered necessary equipment for procedure	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
B. Asked someone to help with the double bagging procedure	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
C. Held clean, cuffed bag open correctly at entrance to unit	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
D. Placed bagged items from inside unit correctly into the clean bag	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
E. Folded over top of bag and fastened it correctly	☐	☐
Comments: ______________________________ ______________________________ ______________________________		

JOB SHEET #2

		Performed well	Needs improvement
F.	Labeled bags correctly	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
G.	Took bags to proper disposal or unit area	☐	☐

Comments: ____________________

____

____

INFECTIOUS DISEASE CONTROL
AND ISOLATION TECHNIQUE
UNIT III

JOB SHEET #3--PUT ON AND REMOVE MASK AND GOWN

I. Equipment

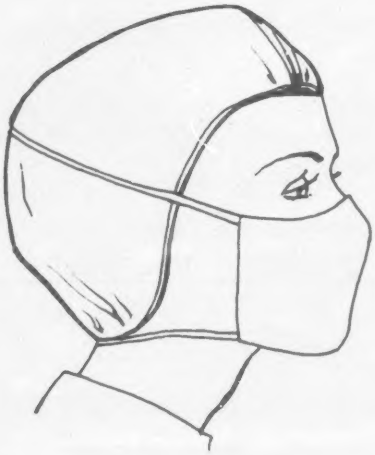
- A. Mask
- B. Gown
- C. Head covering

II. Procedure to put on mask and gown

- A. Wash hands
- B. Put on head covering
- C. Position mask over both nose and mouth (Figure 1)

  (**CAUTION**: Check mask for fit and comfort. Face and mask must not be touched again after entering the isolation unit until you have washed your hands. Mask must be changed frequently according to type. If mask becomes wet, **DISCARD**.)

FIGURE 1

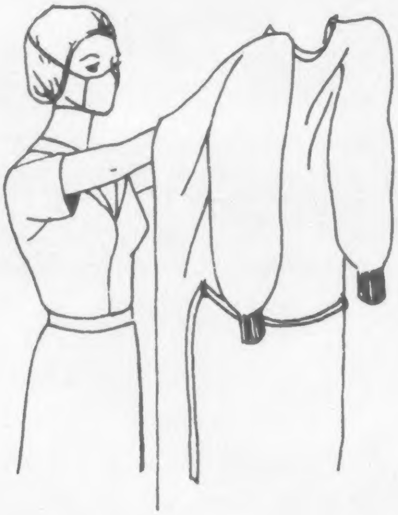


- D. Put on gown
  1. Pick up folded gown by the neckband and shake slightly to straighten

JOB SHEET #3

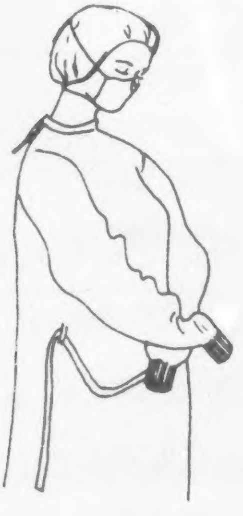
2. Slide gown onto arms by holding arms forward and slightly above shoulder level (Figure 2)

FIGURE 2



3. Pull one sleeve on, using opposite hand inside second sleeve (Figure 3)

FIGURE 3



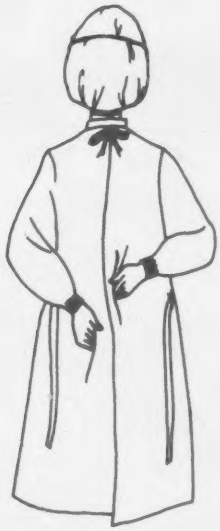
4. Pull on second sleeve

   (CAUTION: Do not touch outside of gown with hands. If by accident you do touch outside of gown, wash hands before fastening ties.)

JOB SHEET #3

5. Fasten gown at neck
6. Grasp gown at waistline and lap the right side over the left side (Figure 4)

FIGURE 4



7. Hold overlapped edge with right hand
8. Grasp left belt and pull it around to the back
9. Pick up right belt, draw into place, and tie belt

   (CAUTION: Your hands are now contaminated. Gown below shoulder level is always considered to be contaminated.)

III. Procedure to remove gown and mask

A. Untie belt

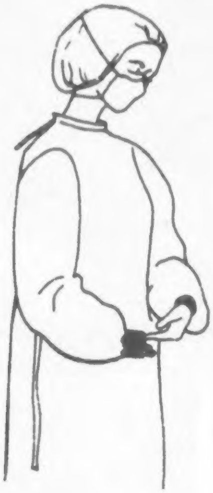
B. Wash and dry hands

C. Unfasten neck of gown

JOB SHEET #3

D. Pull off first sleeve by slipping fingers of other hand inside cuff (Figure 5)

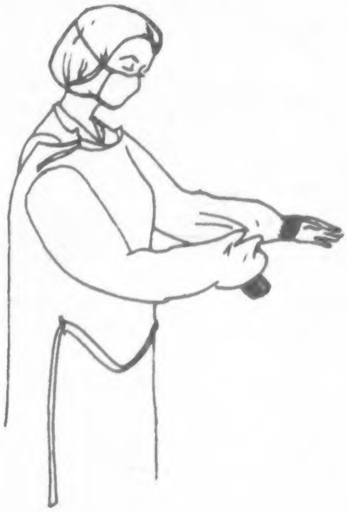
FIGURE 5



(**CAUTION:** Do not touch outside of cuff. The outside is contaminated; the inside of cuffs and hands are clean.)

E. Grasp second sleeve with hand inside first sleeve (Figure 6)

FIGURE 6

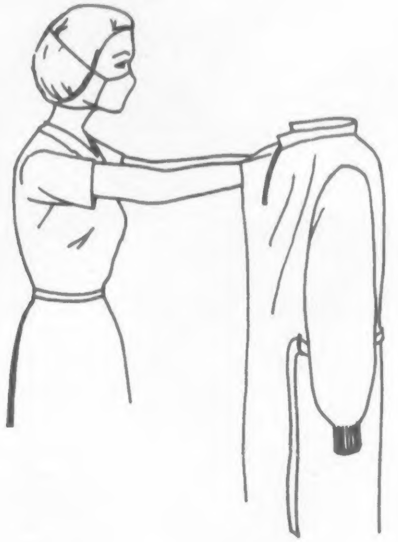


F. Pull off second sleeve

JOB SHEET #3

G. Fold gown without touching outer surface of gown by bringing shoulder seams together; hold gown away from uniform (Figure 7)

FIGURE 7



H. Dispose of paper gown properly and place soiled cloth gown in soiled linen receptacle

I. Wash hands

J. Remove and discard mask and head covering

K. Wash hands

JOB SHEET #3

III. Checklist for putting on and removing mask and gown

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ____________________

____

____

B. Washed hands correctly	☐	☐

Comments: ____________________

____

____

C. Put on head covering properly	☐	☐

Comments: ____________________

____

____

D. Positioned mask over both nose and mouth correctly	☐	☐

Comments: ____________________

____

____

E. Picked up folded gown by neckband and shook slightly to straighten	☐	☐

Comments: ____________________

____

____

JOB SHEET #3

	Performed well	Needs improvement
F. Slid gown onto arms by holding arms forward and slightly above shoulder level	☐	☐
Comments: ____________________		
G. Pulled on one sleeve correctly by using opposite hand inside second sleeve	☐	☐
Comments: ____________________		
H. Pulled on second sleeve correctly	☐	☐
Comments: ____________________		
I. Fastened gown at neck properly	☐	☐
Comments: ____________________		
J. Grasped gown at waistline and lapped right side over the left side correctly	☐	☐
Comments: ____________________		

JOB SHEET #3

	Performed well	Needs improvement
K. Held overlapped edge with right hand, grasped left belt and pulled it around back, picked up right belt and tied belt correctly	☐	☐
Comments: ____________________ ____________________ ____________________		
L. Untied belt and washed and dried correctly	☐	☐
Comments: ____________________ ____________________ ____________________		
M. Unfastened neck of gown correctly	☐	☐
Comments: ____________________ ____________________ ____________________		
N. Pulled off first sleeve correctly by slipping fingers of other hand inside cuff	☐	☐
Comments: ____________________ ____________________ ____________________		
O. Grasped second sleeve with hand inside first sleeve and pulled off second sleeve correctly	☐	☐
Comments: ____________________ ____________________ ____________________		

JOB SHEET #3

		Performed well	Needs improvement
P.	Folded gown without touching outer surface of gown by bringing shoulder seams together; kept gown away from uniform	☐	☐

Comments: ____________________

____

____

Q.	Disposed of paper gown properly and placed soiled cloth gown in soiled linen receptacle	☐	☐

Comments: ____________________

____

____

R.	Washed hands correctly	☐	☐

Comments: ____________________

____

____

S.	Removed and discarded mask and head covering correctly	☐	☐

Comments: ____________________

____

____

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INFECTIOUS DISEASE CONTROL
AND ISOLATION TECHNIQUE
UNIT III

TEST

NAME ______________________________ SCORE ______________

1. Match terms associated with the control of infectious diseases to the correct definitions. Write the correct numbers in the blanks.

______ a. Agent that destroys bacteria

______ b. Person who harbors a specific pathogen without any symptoms, but who is capable of spreading the organism to others

______ c. Widespread epidemic disease

______ d. To make unsterile or unclean by contact with the person who has an infectious disease or with articles handled by the infected person

______ e. Study of the incidence, distribution, and control of infectious diseases

______ f. Agent that destroys pathogenic organisms

______ g. Free from germs or infection

______ h. Invasion of the body by pathogenic organisms and the reaction of the tissues to them

______ i. Destruction of pathogenic organisms usually by chemical means

______ j. Inanimate objects or materials on which pathogens may be conveyed

______ k. Prevention of infection by the inhibition or destruction of the causitive organism

______ l. Infection in the blood

______ m. Disease caused by or capable of being communicated by infection

______ n. Insect which spreads disease from one host to another

1. Epidemiology
2. Infection
3. Infectious disease
4. Contaminate
5. Vector
6. Pandemic
7. Disinfection
8. Disinfectant
9. Septicemia
10. Antisepsis
11. Carrier
12. Asepsis
13. Fomites
14. Bactericide

______o. Disease which can be transmitted from one person to another

______p. Bacteria in the blood

______q. Relative power or ability of pathogens to produce disease

______r. Disease present in a community at all times but occurring in only small numbers of people

______s. Presence of toxins in the blood

______t. Complete destruction of microorganisms and their pathogenic products

______u. Form of septicemia in which multiple abscesses are formed in internal organs

______v. Causing no trouble or symptoms

______w. Infection that has been acquired while in the hospital

______x. Diseases which affect a large number of people in a community at the same time

______y. Agent that will prevent the growth and development of microorganisms without necessarily destroying them

______z. Increase in the severity of symptoms or disease

______aa. Inhibition of growth of bacteria, usually by chemical means

15. Endemic
16. Bacteriostasis
17. Antiseptic
18. Exacerbation
19. Quiescent
20. Communicable disease
21. Epidemic
22. Bacteremia
23. Toxemia
24. Sterilization
25. Pyemia
26. Nosocomial
27. Virulence

2. Distinguish between the origins of infection. Write an "O" for opportunist infections and a "T" for true pathogenic infections in the blanks.

______a. Organisms which are able to invade tissues of healthy individuals through an inherent power of their own

______b. These organisms produce diseases only when given the opportunity to invade body tissues either through injury to skin or when body resistance is low

______c. Many types of microorganisms are present in the human body and are beneficial to body functions

______d. These organisms are transmitted directly from one person to another or from the environment

3. Match forms of infections to their correct definitions. Write the correct numbers in the blanks.

_____a. Infection involving the whole body
_____b. Infection confined to one spot or area
_____c. Localized infection in which organisms leave the infected area and travel to other parts of the body
_____d. Infection caused by more than one organism
_____e. First or original infection
_____f. Inactive or hidden infection that may show symptoms at a later date
_____g. Infection which follows or complicates the original disease

1. Local
2. Focal
3. Systemic
4. Primary
5. Secondary
6. Latent
7. Mixed

4. List effects of pathogens on tissue.

a. ____________________

b. ____________________

c. ____________________

5. Describe stages of an acute infection.

a. Incubation-- ____________________

____

b. Prodromal-- ____________________

____

c. Acute-- ____________________

____

d. Convalescent- ____________________

____

6. Select from the following list factors that influence the occurrence of infection. Write an "X" in the correct blanks.

_____a. Virulence
_____b. Size of organism
_____c. Body size
_____d. Portal of entry

_____e. Resistance of the person

_____f. Sex

_____g. Number of organisms

_____h. Genes

7. List ways in which communicable diseases are transmitted.

   a. ______________________________

   b. ______________________________

   c. ______________________________

   d. ______________________________

   e. ______________________________

   f. ______________________________

8. State ways in which transmission of infections can be controlled.

   a. ______________________________

   b. ______________________________

   c. ______________________________

9. Distinguish between methods of controlling organisms inside (I) and outside (O) of the body. Write the correct letter in the blanks.

   _____a. Use anti-infective and antibiotic drugs to treat infectious diseases

   _____b. Destroy microorganisms

   _____c. Treat symptomatically

   _____d. Get available immunizations for long-lasting immunity

   _____e. Promote bacteriostasis in food by proper freezing and canning

   _____f. Use immediate protection with temporary immunity of gamma globulin and antitoxins if exposed to an infectious disease

   _____g. Control pollution

10. Select from the following list adverse effects of improper or excessive use of antibiotics and anti-infective drugs. Mark each correct answer with an "X."

   _____a. Toxic side effects may occur with prolonged use

   _____b. Long-bone growth may occur

   _____c. Allergy to drugs may develop

______ d. Organism may become resistant to drug

______ e. Premature aging may occur

______ f. Normal flora of body may be upset or destroyed with resulting abnormal overgrowth of some organisms

______ g. Predisposition to diabetes may develop

11. Match terms associated with immunology to the correct definitions. Write the correct numbers in the blanks.

______ a. Substance capable of producing hypersensitivity

______ b. Any substance which stimulates the formation of antibodies when introduced into the body

______ c. Study of resistance to disease

______ d. Abnormal hypersensitivity to one or more substances

______ e. Resistance to disease

______ f. Protein substance developed by the body in response to the presence of an antigen

______ g. Local or generalized condition in which the body tissues retain tissue fluid

1. Immunology
2. Immunity
3. Antigen
4. Antibody
5. Allergy
6. Allergen
7. Edema

12. Describe nonspecific types of resistance to disease.

a. Species resistance-- ______________________________

____

____

b. Racial or group resistance-- ______________________________

____

____

____

____

____

____

c. Individual resistance-- ____________________

d. Mechanical and chemical barriers-- ____________________

e. Phagocytosis-- ____________________

f. Inflammation response or reaction-- ____________________

13. Select from the following list symptoms of acute inflammation reaction. Mark each correct answer with an "X."

_____a. Pain

_____b. Heat

_____c. Cyanosis

_____d. Redness

_____e. Jaundice

_____f. Ecchymosis

_____g. Loss of function

_____h. Cold

_____i. Edema

14. State the major principles of treatment of acute inflammation.

a. ____

____

b. ____

____

c. ____

____

d. ____

____

15. Distinguish between primary (P) and secondary (S) unions in the repair of damaged tissues. Write the correct letter in the blanks.

_____a. Takes a longer period of time

_____b. Healing of a clean, closed wound

_____c. Healing of a large, gaping, or irregular wound

_____d. Occurs in a short period of time

16. Describe types of acquired immunity.

a. Active-- ____

____

____

b. Passive– ______________________________

____

____

17. Discuss characteristics of an allergy.

____

____

____

____

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18. Describe body reactions that occur in the rejection syndrome.

____

____

____

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____

____

____

____

19. Match terms associated with isolation technique to the correct definitions. Write the correct numbers in the blanks. Definitions are continued on the next page.

_____a. Care of the patient's unit and belongings after the infectious period has ended or when articles are removed from the unit

_____b. Separation of persons having an infection or contagious disease from others; separation of contaminated articles

_____c. Large blister filled with fluid

_____d. Exposed to pathogenic organisms

_____e. Waste material cast off by the body

_____f. Necrosis of a part due to failure of blood supply, to disease, or to injury

_____g. Disinfection carried on daily or as often as necessary in patient care

_____h. Nursing care procedures to prevent the spread of an infection or contagious disease from one person to another

_____i. Acute, infectious, inflammatory disease of the liver caused by a virus; transmitted orally; may be epidemic

_____j. Killing of pathogenic organisms by chemical or physical means; commonly used on inanimate objects

_____k. Modified surgical asepsis to prevent the introduction of disease-producing organisms into a patient's unit

_____l. Form of viral hepatitis transmitted by the parenteral injection of human blood or blood products contaminated with the hepatitis virus

_____m. Inflammation of the intestine, particularly the colon, due to varied causes; characterized by abdominal pain, tenesmus, and diarrhea with blood or mucus

1. Contaminated
2. Isolation
3. Isolation technique
4. Terminal disinfection
5. Gangrene
6. Infectious hepatitis
7. Concurrent disinfection
8. Excreta
9. Bulla
10. Vesicle
11. Necrosis
12. Dysentery
13. Gas gangrene
14. Serum hepatitis
15. Disinfection
16. Reverse or protective isolation technique

_____n. Small blister filled with fluid

_____o. Pathological death of a cell or group of cells in contact with living tissue

_____p. Form of gangrene occurring in massive wounds; caused by anaerobic bacilli; characterized by high fever, offensive purulent discharge, and presence of gas bubbles in the tissues

20. Select from the following list purposes of isolation technique. Mark each correct answer with an "X."

_____a. Provide safe disposal or disinfection of equipment and supplies

_____b. Provide learning opportunities

_____c. Protect patient from contracting another disease or infection

_____d. Provide privacy for patients

_____e. Restrict visitors

_____f. Remove patient from source of infection

_____g. Protect other patients and personnel

_____h. Save equipment

21. Distinguish between isolation techniques used for the various systems. Write a "WSP" for wound and skin precautions, an "RP" for respiratory precautions, an "EP" for enteric precautions, and a "BSP" for blood and serum precautions in the correct blanks.

_____a. Syringes and needles must be disposed of properly or disinfected when taken from the unit

_____b. Private room is desirable

_____c. Excreta should be disposed of according to hospital policy

_____d. Gown must be worn by anyone having direct contact with infected wound

_____e. Gowns are not necessary but masks must be worn by those entering room or worn by method required by hospital policy

_____f. Gloves must be worn by all persons having direct contact with the infected area

_____g. Any dressing with drainage from wounds should be disposed of properly

_____h. Private room is necessary for children only ______i. Oral and nasal discharges must be disposed of by method required by hospital policy

______j. Masks are not usually necessary

______k. All disposable items must be eliminated according to hospital policy; any reusuable articles should be bagged and sterilized in proper manner

______l. All items taken from the room must be disinfected according to the contaminating organisms

______m. Gloves must be worn by all persons having direct contact with patient or with articles contaminated with fecal material

______n. Hands must be washed upon entering and leaving room

______o. Private room is necessary and door *must* be kept closed

______p. All articles taken from the room must be disinfected or disposed of properly

22. Select from the following list general principles of isolation. Mark each correct answer with an "X."

______a. Equipment should be kept to a minimum

______b. Gowns, gloves, and masks should always be worn

______c. Articles that cannot be sterilized or soaked in disinfectant should be washed or wiped off with disinfectant and aired for 12 hours

______d. Frequent handwashing is the most important rule to follow

______e. Patient should be bathed more frequently

______f. Isolation prevents patient from smoking

______g. Each nurse is responsible for learning about and maintaining isolation procedures used in facility where he or she works

______h. Isolation patients may visit each other

______i. Anything taken from the unit should be disinfected, sterilized, or burned

______j. Isolation technique is effective only when each worker knows and follows the procedures exactly

______k. Isolation saves nurse staffing time

______l. Procedures such as double bagging of disposable items must be done with two persons, one remaining inside the room and one outside the room

______m. Isolation increases sensory stimuli to patients _____n. Books, magazines, and newspapers should be burned

_____o. All items removed from the isolation unit must be labeled **ISOLATION**

_____p. Isolation saves money

_____q. Nursing care should be planned to provide all equipment needed and avoid unnecessary trips in and out of unit

_____r. Isolation units should be properly identified

23. Describe clothing worn when using isolation technique.

a. Mask-- ____

____

____

____

____

b. Gowns-- ____

____

____

____

____

____

____

____

c. Gloves-- ____

____

____

____

____

d. Shoes-- ____

____

____

____

____

e. Caps-- ______

24. State rules to remember when using reverse or protective isolation.

a. ______

b. ______

c. ______

d. ______

e. ______

f. ______

25. State nursing responsibilities to meet the emotional needs of the isolated patient.

a. ______

b. ______

c. ______

d. ______

26. Complete immunization records.

27. Demonstrate the ability to:

a. Use proper isolation techniques.

b. Use double bagging technique.

c. Put on and remove mask and gown.

(NOTE: If activities 26 and 27 have not been finished before the test, ask your instructor when they should be completed.)

INFECTIOUS DISEASE CONTROL AND ISOLATION TECHNIQUE
UNIT III

ANSWERS TO TEST

1. a. 14
   b. 11
   c. 6
   d. 4
   e. 1
   f. 8
   g. 12
   h. 2
   i. 7
   j. 13
   k. 10
   l. 9
   m. 3
   n. 5
   o. 20
   p. 22
   q. 27
   r. 15
   s. 23
   t. 24
   u. 25
   v. 19
   w. 26
   x. 21
   y. 17
   z. 18
   aa. 16
2. a. T
   b. O
   c. O
   d. T
3. a. 3
   b. 1
   c. 2
   d. 7
   e. 4
   f. 6
   g. 5

4. a. Mechanical injury

   b. Destruction of body cells or tissues

   c. Injury by toxins

5. Description should include:

   a. Incubation--Period between entrance of organisms to the body and onset of symptoms

   b. Prodromal--Short period, usually a day or less, when symptoms are vague or cause only mild discomfort

   c. Acute--Period of actual illness; symptoms, degree of fever, and length of time depend upon the disease, condition of patient, and treatment

   d. Convalescent--Begins with decline of fever and acute symptoms; length of time depends upon the severity of the acute stage, treatment, and general health of the patient

6. a, d, e, g

7. a. Airborne

   b. Direct personal contact

   c. Vehicle

   d. Vector

   e. Animals

   f. Fomites

8. a. Protect all portals of entry

   b. Protect all portals of exit

   c. Prevent exposure to vectors or carriers of infection

9. a. I

   b. O

   c. I

   d. I

   e. O

   f. I

   g. O

10. a, c, d, f

11. a. 6
    b. 3
    c. 1
    d. 5
    e. 2
    f. 4
    g. 7

12. Description should include:

    a. Species resistance--One species of animals is resistant to diseases which afflict another species

    b. Racial or group resistance

        1) Certain races or groups have resistance to some diseases to which other groups are highly susceptible

        2) When a disease organism is first introduced into a group or race, it is very virulent

        3) Continued exposure to a certain disease gradually increases the group's immunity

    c. Individual resistance

        1) Sometimes referred to as *genetic* or *inherited* resistance

        2) Individual resistance may vary from time to time

        3) Other conditions such as malnutrition, alcoholism, fatigue, or stress affect individual resistance

    d. Mechanical and chemical barriers

        1) Unbroken skin or mucous membranes protect from disease

        2) Lacrimal secretions are somewhat bactericidal

        3) Cilia and mucous membranes protect air passages

        4) Gastrointestinal tract is protected somewhat by gastric secretions

    e. Phagocytosis

        1) Is method by which white blood cells ward off infections

        2) Helps to limit focus of infection

f. Inflammation response or reaction

  1) Most important of all the nonspecific resistances

  2) Living body tissue responds to irritation or injury by inflammation of area affected

13. a, b, d, g, i

14. a. Rest for inflamed area to prevent spread of pathogens and increase of inflammation

  b. Application of heat to dilate blood vessels that increase the flow of blood, white cells, and antibodies to the affected area

  c. Opening areas for drainage to let bacteria escape and to relieve tension and swelling of inflamed area

  d. Taking appropriate antibiotics to supplement the body's natural defenses to fight the inflammation

15. a. S

  b. P

  c. S

  d. P

16. Description should include:

  a. Active

    1) Produced when antigens, either microorganisms or exotoxins, are introduced into the body, causing it to produce specific antibodies

    2) May last for years or a lifetime

  b. Passive

    1) Produced when antibodies or antitoxins developed by another person or animal are introduced into the body

    2) May be temporary

17. Discussion should include:

  a. Cannot occur on first contact with potential allergen because antibodies have not been produced

  b. Allergens produce antigen-antibody reaction within the cells of the sensitized tissues

c. Some allergic disorders are associated with emotional disturbances

d. Treatment may include avoiding the allergen, desensitization, or antihistamines

e. Allergens include pollen, dust, foods, cosmetics, dyes, bee stings, animal fur, and various drugs

18. Description should include:

a. Type of antigen-antibody reaction occurs within the body

b. Every organism has a natural tendency to reject foreign substances, especially tissues from another person or animal

c. Tissues or organs to be transplanted must be cross-matched in the same way that blood is matched for transfusion

d. Drugs that suppress antibody formation are used to decrease tissue rejection

19. a. 4
b. 2
c. 9
d. 1
e. 8
f. 5
g. 7
h. 3
i. 6
j. 15
k. 16
l. 14
m. 12
n. 10
o. 11
p. 13

20. a, c, f, g

21. a. BSP
b. WSP
c. EP
d. WSP
e. RP
f. WSP
g. BSP
h. EP
i. RP
j. EP
k. WSP
l. EP
m. EP
n. EP
o. RP
p. RP

22. a, c, d, g, i, j, l, n, o, q, r

23. Descriptions should include:
    a. Mask
        1) May be made from cloth or disposable paper
        2) Must be changed frequently according to type used
        3) Should be removed and discarded or placed in a soiled linen receptacle when not in use
        4) Make sure mask completely covers mouth and nose
    b. Gowns
        1) May be made from cloth or disposable paper
        2) Cloth gowns may be used more than once if removed and put on properly, following a strict routine
        3) Insides of gowns, fasteners, neckband, and surrounding areas are uncontaminated
        4) Scrub gowns may be worn in place of the uniform in some isolation units
        5) If in doubt of a gown's cleanliness, discard and select another one
    c. Gloves
        1) Clean gloves may need to be worn when doing some procedures; others may call for sterile gloves
        2) Nurse should remove jewelry and place in pocket before putting on gloves
    d. Shoes
        1) Disposable shoes as worn in surgery must be worn over regular shoes
        2) If the disposable shoes are not available, a mat treated with disinfectant should be placed at the exit from the unit for cleaning the shoe soles
    e. Caps
        1) May be made from cloth or paper
        2) Must cover ALL of hair to be effective

24. a. Doors to the unit are kept closed at all times
    b. All persons must scrub and wear sterile or clean mask, gown, cap, and gloves while providing care

c. All equipment to be taken into unit is sterilized

d. Books, magazines, and newspapers are sterilized in hot air for one hour at 300°F (150°C)

e. Disposable or sterile food containers and utensils are used

f. Concurrent disinfection is carried out at least once daily

25. a. Explain isolation to patient and family

b. Provide reassurance and emotional support

c. Check the patient frequently to keep him or her from feeling neglected or lonely

d. Provide diversions for the patient since he or she will be alone much of the time

26. Evaluated to the satisfaction of the instructor

27. Performance skills evaluated to the satisfaction of the instructor

THE PATIENT'S ENVIRONMENT
UNIT IV

UNIT OBJECTIVE

After completion of this unit, the student should be able to admit, transfer, and discharge patients in a hospital setting. The student should also be able to provide the patient with a comfortable and safe environment. This knowledge will be evidenced by completion of job sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the patient's admission, transfer, discharge, and environment to the correct definitions.
2. List common feelings the patient may have about hospitalization.
3. Select from a list common legal forms that the patient may need to fill out or sign during the admission process.
4. Describe the nurse's role in admitting the patient.
5. Select from a list ways to help the patient during admission.
6. List general observations to make during the admission process.
7. Describe common records that are made and kept during the patient's hospitalization.
8. Select from a list basic equipment needed in a patient unit.
9. Describe ways in which the environment can be controlled for the patient's comfort and health.
10. Select from a list safety measures that are nursing responsibilities.
11. Match terms associated with rest and sleep to the correct definitions.
12. State reasons rest and sleep are needed.
13. Describe factors that may interfere with sleep.
14. List common effects of lack of sleep.
15. State measures that the nurse may use to promote rest and/or induce sleep.
16. List observations to make concerning the patient's rest and sleep.
17. Match terms associated with special equipment used in making beds to the correct definitions.

18. State reasons a patient's bed should be made correctly.
19. Label additional equipment that may vary the usual bed-making procedure.
20. Identify bed positions.
21. Match terms associated with body mechanics to the correct definitions.
22. Select from a list reasons for using proper body mechanics.
23. Describe principles of gravity which affect balance.
24. State principles of body mechanics.
25. Demonstrate the ability to:
    a. Prepare a patient unit.
    b. Admit a patient.
    c. Take height and weight (adult and infant).
    d. Apply principles of body mechanics.
    e. Make an unoccupied bed and an open bed.
    f. Make an occupied bed.
    g. Make a postoperative bed.
    h. Transfer a patient.
    i. Discharge a patient.

THE PATIENT'S ENVIRONMENT
UNIT IV

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

   A. Provide students with objective sheet.

   B. Provide students with information sheet and make transparencies.

   C. Discuss unit and specific objectives.

   D. Discuss information sheet.

   E. Obtain legal forms used in your hospital to familiarize students with admission process.

      (NOTE: Invite the admissions nurse, if your hospital utilizes one, to talk with students about the admissions process. One of the students may even roleplay by answering questions and filling out the forms.)

   F. Begin discussing the various forms found in the chart and Kardex to help students become familiar with the forms used in your hospital. If possible let them fill in some of the forms with simulated information.

   G. Take students into clinical laboratory area and show them the basic equipment and how it is used in a patient unit.

   H. Invite a physical therapist to discuss and demonstrate good body mechanics and exercises that will strengthen muscles.

   I. Demonstrate and discuss procedures outlined in job sheets.

      (NOTE: You may need to add or delete items from job sheets to meet the needs of your local hospital.)

   J. Allow students to practice job skills until they are ready to return the demonstration to you.

   K. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Transparency masters

      1. TM 1--Base of Support: Anterior View

      2. TM 2--Base of Support: Lateral View

3. TM 3--Alignment: Correct and Incorrect
4. TM 4--Posture: Standing
5. TM 5--Posture: Sitting
6. TM 6--Lifting Correctly and Incorrectly

D. Job sheets

1. Job Sheet #1--Prepare a Patient Unit
2. Job Sheet #2--Admit a Patient
3. Job Sheet #3--Take Height and Weight (Adult and Infant)
4. Job Sheet #4--Apply Principles of Body Mechanics
5. Job Sheet #5--Make an Unoccupied Bed and an Open Bed
6. Job Sheet #6--Make an Occupied Bed
7. Job Sheet #7--Make a Postoperative Bed
8. Job Sheet #8--Transfer a Patient
9. Job Sheet #9--Discharge a Patient

E. Test

F. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study.* Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1973.

B. Thomas, Clayton L., ed. *Taber's Cyclopedic Medical Dictionary.* Philadelphia: F.A. Davis Company, 1977.

IV. Filmstrips:

(NOTE: The following filmstrips are available from Trainex Corporation, Box 116, Garden Grove, California 92642.)

A. *Admission and Discharge.*

B. *Basic Bedmaking for Patient Comfort and Safety.*

C. *Occupied Bed Making.*

THE PATIENT'S ENVIRONMENT
UNIT IV

INFORMATION SHEET

I. Terms associated with the patient's admission, transfer, discharge, and environment

   A. Diagnosis--Recognition of disease state from symptoms, examinations, and results of tests performed

   (NOTE: Upon admission, a patient will have what is called an *admitting diagnosis* from his or her doctor.)

   B. Prognosis--Prediction of the course of a disease

   (NOTE: The prognosis may not be known when the patient is admitted, but may be later found in the chart under Progress Notes written by the patient's physician.)

   C. Observation--Process of recognizing and noting some fact or occurrence

   D. Objective symptom--Any change in the body or its functions that is obvious to the senses of the observer

   Examples: Rash, laceration, odor, cough

   E. Subjective symptom--Any change in the body or its functions that is known by the patient that is not visible to others

   Examples: Headache, pain, nausea, anxiety

   F. Policy--Acceptable procedure or set standard made by a governing authority

   G. Department--Specialized division that may be a part of an institution

   Examples: Dietary, housekeeping, pharmacy, nursing

   H. Therapeutic--Something having medicinal or healing qualities

   I. Environment--Surroundings, conditions, or influences that affect an organism

   J. Humidity--Amount of moisture in the atmosphere

   K. Privacy--Seclusion or freedom from unauthorized observation

   L. Side rails--Side attachments for hospital beds to protect and/or assist patients

   M. Patient unit--Area that includes bed, bedside table, and other furnishings and equipment set aside for use by one patient

INFORMATION SHEET

N. Hazardous--Capable of causing injury or danger

O. Emesis basin--Kidney-shaped metal or plastic utensil

P. Bed cradle--Frame to keep the patient's bedclothes from touching all or part of the patient's body

Q. Bedpan--Shallow vessel used for defecation or urination by patients confined to bed

R. Urinal--Receptacle for urine

S. Drawsheet--Sheet used to protect bed or turn the patient

Examples: Sheets made from rubber, plastic, or heavy cotton

T. Kardex--Visible card file in which nursing care plans are kept

U. Patient care plan--Information about a patient that communicates the actions that will be taken to meet the needs of the patient

(NOTE: May also be known as a Nursing Care Plan.)

II. Common feelings the patient may have about hospitalization (Job Sheets #8 and #9)

(NOTE: People have a tendency to react in many different ways when hospitalized. They may or may not exhibit these feelings, but many will have several of them listed below. These feelings are normal and the patient should be allowed to express these emotions.)

A. Anxiety and apprehensiveness

Examples: The patient may wring hands, make nervous gestures, make abrupt statements, cry, or become angry

B. Stress caused from different factors

Examples: The patient may be withdrawn and very quiet, talk constantly, become very dependent and often call for reassurance

C. Fear of loss of identity and privacy

(NOTE: The patient may feel he or she has become a number or a diagnosis upon entering the hospital. All patients should be called by their name, such as Mrs. Wells or Mr. Stewart, but never by a nickname or their first name unless they suggest it.)

D. Fear of pain, treatment, or surgery

(NOTE: Fear of the unknown is the worst fear of all, and the patient needs to be told what will happen to him or her, procedures to be used if there will be pain, and what will be done to relieve it. Only then can a patient prepare for what will happen.)

INFORMATION SHEET

E. Concern about the expenses of hospitalization

(NOTE: The patient may worry about how much it will cost for his or her hospitalization. The patient may also worry about the family that is left at home and how the family will cope in his or her absence.)

F. Loss of independence

(NOTE: The patient may suffer a feeling of helplessness while hospitalized. To make him or her feel more in control, the nursing staff can include the patient's wishes to some degree in making out the nursing care plan.)

G. Worry that the patient may be unable to care for himself or herself upon leaving the hospital

III. Common legal forms that the patient may need to fill out or sign during the admission process

A. Consent for special procedures

B. Consent for surgery

C. Authorization for medical and/or surgical treatment

D. Insurance verification forms

E. Release forms

Example: As a general rule, hospitals make it a policy that the side-rails on a patient's bed be up. If the patient insists upon not following this policy, he or she may be asked to sign a form releasing the hospital from any responsibility if the patient injures himself or herself because of this request

IV. Nurse's role in admitting the patient

A. Make a good first impression on the patient

1. The first person who greets the patient creates the atmosphere that will help determine the patient's attitude

2. Smile and show empathy for the patient's feelings

3. Call the patient by his or her name (Miss, Ms., Mr., or Mrs.) and give your name and title

Example: "Good morning, Mr. Cole. I am Dick Hensle, a student nurse."

INFORMATION SHEET

B. Be courteous with the patient's family and help them feel comfortable

   1. Explain hospital policies to the family in clear terms

   2. Ask the family members if they have questions concerning the patient's hospitalization

   3. Direct the family members to waiting rooms, snack areas, cafeterias, or restrooms if they are not familiar with the hospital

   4. Remember you are not treating just the patient, but the whole family

   (NOTE: At the beginning it is good to build a relationship with the family. You will need their cooperation and assistance many times.)

V. Ways to help the patient during admission (Job Sheets #1 and #2)

(NOTE: Much of this process will take place in the admissions office. Most papers will be signed at this time.)

A. Check with admissions office for the correct room number for the patient being admitted

(NOTE: The admission office will call and give you information such as the name, sex, diagnosis, and condition of the patient and what room number he or she has been assigned.)

B. Open the bed to receive the patient and check to make sure all the equipment is in place and working properly

C. Call the patient by correct name

D. Orient the patient and family to the room and to the equipment he or she will be using

Examples: Bed controls, television, call system, telephone

E. Introduce patient to the person that will be sharing the room if it is a semi-private room

F. Provide for privacy

G. Answer all questions carefully, or refer patient to the appropriate person

H. Make sure all identification forms have the correct information and are consistent

Examples: ID bracelet, chart, requisitions

INFORMATION SHEET

I. Be careful with the patient's personal items

(NOTE: Treat them as you would want your own things treated. Each institution has its own policies regarding the care of patient's clothing and valuables. In most cases, patients are requested not to keep valuable articles at the bedside. These can be sent home with relatives or placed in a vault according to hospital policy. Be sure that this information is written in the patient's chart.)

J. Explain the hospital routine by telling the patient the times meals are served, visiting hours, and about special services

(NOTE: Provide pamphlet describing hospital's policies, schedules, and services provided.)

VI. General observations to make during the admission process (Job Sheet #3)

(NOTE: This information will probably be added to admitting form.)

A. General appearance and behavior (objective)

B. Assistance required

(NOTE: If patient needs extra equipment, such as crutches, walker, cane, or support for walking, be sure you note this on admission.)

C. Symptoms expressed by the patient (subjective)

D. Height and weight

E. Vital signs

(NOTE: These vital signs consist of blood pressure, temperature, pulse rate, and respirations.)

VII. Common records that are made and kept during the patient's hospitalization

A. Requisitions

1. Slips are made out for routine procedures and specific tests that the physicians order

Examples: Urinalysis, blood tests, X-rays

(**CAUTION:** These must be filled out correctly to make sure that the right test is ordered for the right patient.)

2. Other requisitions may be made out for dietary, supplies, and/or equipment for each patient

INFORMATION SHEET

B. Patient care plan

1. Specific care plan is made out for each patient to meet his or her needs more effectively

2. Plan may be found in the Kardex

3. Plan contains information needed to communicate to each staff member the type of care that a particular patient needs

   Examples: Diet; treatments; medications

C. Chart

1. Admission slip contains patient's name, address, doctor's name, admitting diagnosis, insurance numbers, next of kin, and other personal data

2. Consent forms that have been signed and witnessed are included

   Examples: Consent for treatment or surgery

3. Graphic sheets for vital signs are included

4. Nurses' notes contain specific information concerning patient's care

5. Medication sheets indicate which medicines were given, how they were given, and when they were given

   (NOTE: The sheets for nurses' notes and medications may be contained in one form.)

6. Forms to which requisitions may be attached are included

   (NOTE: These may be divided into sections, such as laboratory, radiology, or respiratory therapy.)

7. Forms for doctors to write orders are included

8. Progress notes are written each day by physician and other members of health care team

9. Any other reports about the patient's hospitalization are included

VIII. Basic equipment needed in a patient unit

A. Hospital bed

Examples: Electric or manual

INFORMATION SHEET

B. Bedside table

(NOTE: This should contain equipment needed for patient's personal care, such as a bath basin, emesis basin, bedpan, soap, towel, wash cloth, water pitcher, and glass.)

C. Overbed table

D. Call system

E. One additional chair

F. Linens for bed

IX. Ways in which environment can be controlled for the patient's comfort and health

A. Temperature

1. Thermostats or regulators should be kept at a constant, comfortable temperature

(NOTE: Normal range is 68°-72°F [20°-23°C].)

2. Patients with particular problems need to have a cooler or warmer temperature

B. Noise

1. Voices should be kept low to provide a restful atmosphere

2. Radios, televisions, and other equipment should be monitored so as not to disturb roommates or other patients

C. Humidity

(NOTE: Normal range of humidity is 40-50 percent.)

1. Breathing is easier when there is some moisture in the air

2. Some humidifiers are built into the air control units or vaporizers can add needed moisture

D. Odors

1. Minimize odors by removing all soiled articles as soon as possible from the room

2. If odor is constant, as in a continual discharge or wound drainage, a deodorizer can be obtained to help disguise the odor

INFORMATION SHEET

E. Light

1. Use a minimum of lights in room so that glare will not disturb patient

2. Use direct lighting in procedures that need good exposure

F. Cleanliness

1. Remove any soiled articles from room as soon as possible

2. Keep overbed and bedside tables free from clutter

(NOTE: Ask patient before removing any items.)

3. Remove any extra dishes, glasses, ashtrays, or papers from overbed table before serving patient's meals

X. Safety measures that are nursing responsibilities

A. Check to make sure that communication device and other needed articles are within the reach of the patient

B. Use appliances as directed; label any faulty equipment and remove from the room

C. Keep floor clean of hazardous materials, such as spilled liquids, papers, and broken glass

(NOTE: Remove as much as possible, then report to specific department for further cleaning.)

D. Keep patient's articles within reach

E. Remove hazardous objects, such as safety pins or sharp objects

F. Use proper temperatures for enema solutions, bath water, wet dressings, feeding formulas, and other liquids

G. Do not leave equipment in front of doorways, elevators, or stairwells

H. Provide adequate lighting for patient and personnel

I. Monitor the patient who is smoking

J. Make sure that you read and understand your hospital's plan of action to follow in case of fire, bomb threats, or natural disasters

(NOTE: Attend hospital in-service workshops and take part in drills to prepare yourself for any emergency that might occur.)

K. Wash hands before and after caring for a patient before you work with others

INFORMATION SHEET

XI. Terms associated with rest and sleep

- A. Sleep--Periodic, temporary cessation or interruption of the waking state
- B. Rest--Freedom from activity
- C. Insomnia--Inability to fall asleep or remain asleep throughout the night
- D. Barbiturate--One of a group of organic compounds derived from barbituric acid and commonly called "sleeping pills"

  Examples: Phenobarbital; Seconal
- E. Sedative--Chemical compound used to reduce excitement
- F. Amphetamine--Chemical compound used as a central nervous system stimulant
- G. Hypnotic--Chemical compound used to induce sleep
- H. Disorientation--Loss of recognition of time, place, or person
- I. Misconception--Faulty or inadequate awareness
- J. Confusion--Disturbed perception in regard to time, place, or person

XII. Reasons rest and sleep are needed

- A. Body cells need periods of decreased activity in order to restore themselves
- B. Stress causes the body to overwork; rest is needed to aid in recovery
- C. Mental processes are slowed and mental fatigue occurs from lack of rest and sleep

XIII. Factors that may interfere with sleep

- A. Pain and discomfort
  1. Pain thresholds vary with individuals; some can tolerate more pain than others
  2. Pain and/or discomfort may be caused from external or internal functions

     Examples: Too cold, too warm; wrinkled or wet sheets; dressings too tight

INFORMATION SHEET

B. Stress and tension

   1. Anxiety concerning illness, family, or loss of income

   2. Fear of the unknown

C. Unfamiliar surroundings

   1. Noises

   2. Equipment

   3. People

XIV. Common effects of lack of sleep

(NOTE: These symptoms may occur following loss of sleep. The severity of the symptoms is affected by the individual's age, severity of illness, sleep deprivation, monotony of environment, and duration of surgery.)

A. Fatigue

B. Difficulty in concentration

C. Irritability

D. Episodes of confusion and misconception

E. Disorientation

XV. Measures that the nurse may use to promote rest and/or induce sleep

A. Encourage patient to exercise during the day if able, gradually reducing activity in the evening

B. Give back rub

C. Provide neat, restful environment

Example: Straightening the patient's room and bed linen

D. Change patient's position

E. Provide mid-evening snack or warm milk near bedtime, if allowed

F. Allow time for patient to verbalize feelings

Examples: Medical or surgical procedures, family concerns

G. Provide warm bath

H. Individualize bedtime routines

INFORMATION SHEET

I. Decrease noise in surroundings

J. Adjust lighting to meet patient's needs

(NOTE: If nighttime lighting is necessary, dim the lights and position them so they do not shine directly in the patient's face.)

K. Observe patient throughout night without disturbing him or her with noises or lights

L. Wake patient for medication and treatment only when necessary

M. Provide extra warmth by adding extra covering as needed

N. Use drugs to promote sleep when necessary

(NOTE: Some medications can cause patients to have insomnia. Amphetamines can cause sleeplessness.)

XVI. Observations to make concerning the patient's rest and sleep

(NOTE: Some of these notations are made on the patient's chart and some on the nursing care plan.)

A. Sleep and rest patterns

Examples: Number and length of naps; time patient goes to sleep and awakens; number of times patient awakens during the night

B. Aids to sleep

Examples: Back rub; change in position; medication; snack

C. Environment preferences

Examples: Bed position; number of pillows; light; noise

D. Problems, anxieties, or complaints of the patient

Examples: Fear of surgery; family concerns

XVII. Terms associated with special equipment used in making beds

A. Footboard--Board placed at the patient's feet to prevent footdrop and to keep bed linens off of feet

B. Footdrop--Plantar flexion or turning down of the foot at the ankle due to weakness, injury, disease, or inactivity

C. Bedboard--Board placed under the mattress to provide firmer support

D. Traction equipment--Device attached to the bed to exert pull on a specific part of the body

INFORMATION SHEET

E. Emergency headboard--Board which is detachable for use under a patient when emergency cardiopulmonary resuscitation is needed

F. Sandbags--Sand-filled bags of various sizes used to keep a patient in a specified position

XVIII. Reasons a patient's bed should be made correctly (Job Sheets #5, #6, and #7)

A. Provides for the comfort of the patient

B. Protects patient and nurse from injury

Examples: Keeps linen from dragging on floor; keeps wrinkles from bed linens

C. Saves time needed for patient care

D. Makes performance of other procedures easier

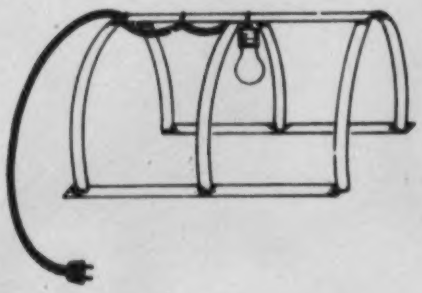
E. Protects beds from bodily discharges

F. Makes patient's unit more attractive

XIX. Additional equipment that may vary the usual bed-making procedure

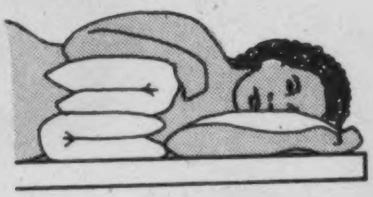
A. Bed cradle

(NOTE: This piece of equipment may be used with or without a heat source, depending on the patient's condition.)

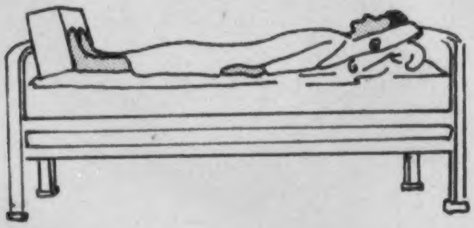


INFORMATION SHEET

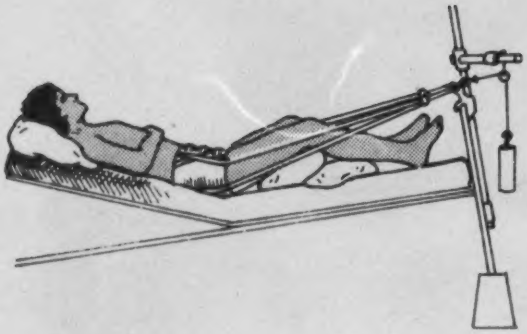
B. Sandbags



C. Footboard



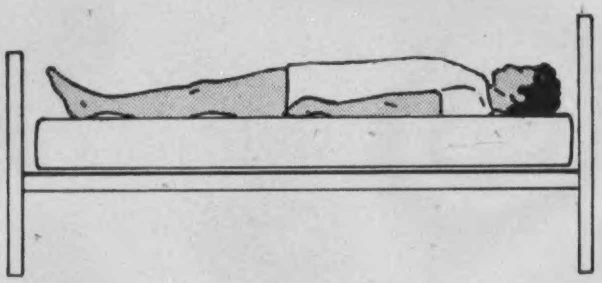
D. Traction equipment



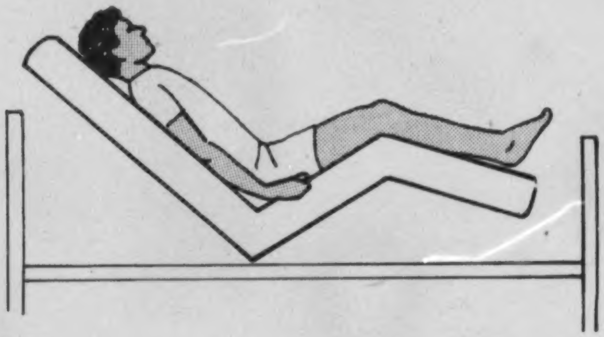
INFORMATION SHEET

XX. Bed positions

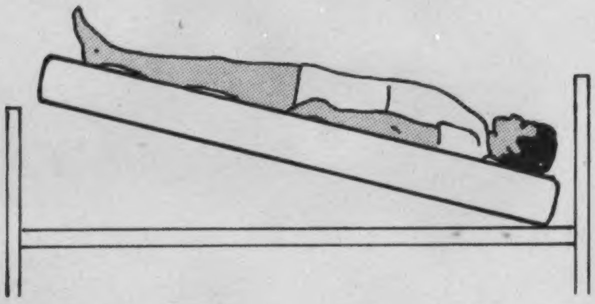
A. Flat with bed level, with or without a pillow under head



B. Fowler's position

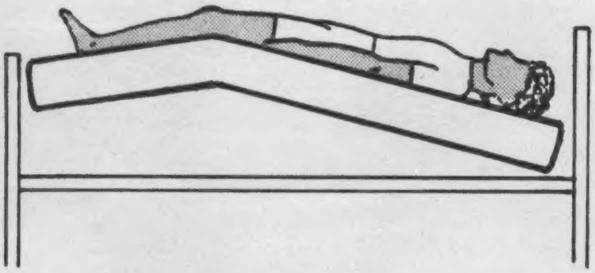


C. Trendelenberg



INFORMATION SHEET

D. Modified Trendelenberg



XXI. Terms associated with body mechanics

A. Body mechanics--Coordination of body alignment, balance, and movement

B. Agility--Ability to move quickly and easily

C. Muscle tone--State of slight contraction present in a normal muscle

D. Strain--Bodily injury from excessive tension, effort, or use

E. Posture--Alignment and position of the body

F. Fatigue--State of increased discomfort and decreased efficiency resulting from prolonged exertion

G. Alignment--Relationship of the body segments to each other

H. Flaccid--Lacking muscle tone

I. Kinesiology--Study of body movement

J. Center of gravity--Point or area in an object or body at which its weight or mass is centered

K. Base of support--Contact of an object or body with the ground or other surface

L. Line of gravity--Imaginary vertical line which passes through the center of gravity of an object or body

XXII. Reasons for using proper body mechanics (Job Sheet #4)

A. Saves energy

B. Prevents muscle strain

C. Increases agility and efficiency

D. Promotes good posture

INFORMATION SHEET

E. Improves health and appearance

F. Preserves muscle tone and strength

G. Sets an example

XXIII. Principles of gravity which affect balance

A. Center of gravity--Balance is more stable when the center of gravity is low

B. Base of support--Balance is more stable when the base of support is broad

C. Line of gravity--Balance is more stable when the line of gravity passes through the base and near the center of the base

XXIV. Principles of body mechanics (Transparencies 1, 2, 3, 4, 5, and 6)

A. Body balance is related to base of support

(NOTE: Broadening the base of support by standing with the feet slightly apart provides better balance and more stability.)

B. Maintaining proper alignment of the body parts reduces strain and fatigue and makes balance easier

(NOTE: Working in bent-over position and poor posture are two examples of improper alignment.)

C. Changes in position and type of activity help maintain muscle tone and lessen fatigue

D. Working or carrying weight close to the body requires less effort

(NOTE: Reaching toward work or carrying heavy objects away from the body causes muscle strain and fatigue.)

E. Proper body alignment while sitting reduces muscle strain and provides better circulation in legs and feet

F. Pulling, sliding, or rolling an object usually requires less effort than lifting it

G. Smooth surfaces create the least friction; therefore, it is easier to move a heavy object on a smooth surface

(NOTE: It is easier to move a patient in a smooth, well-made bed than in a wrinkled, messed-up bed.)

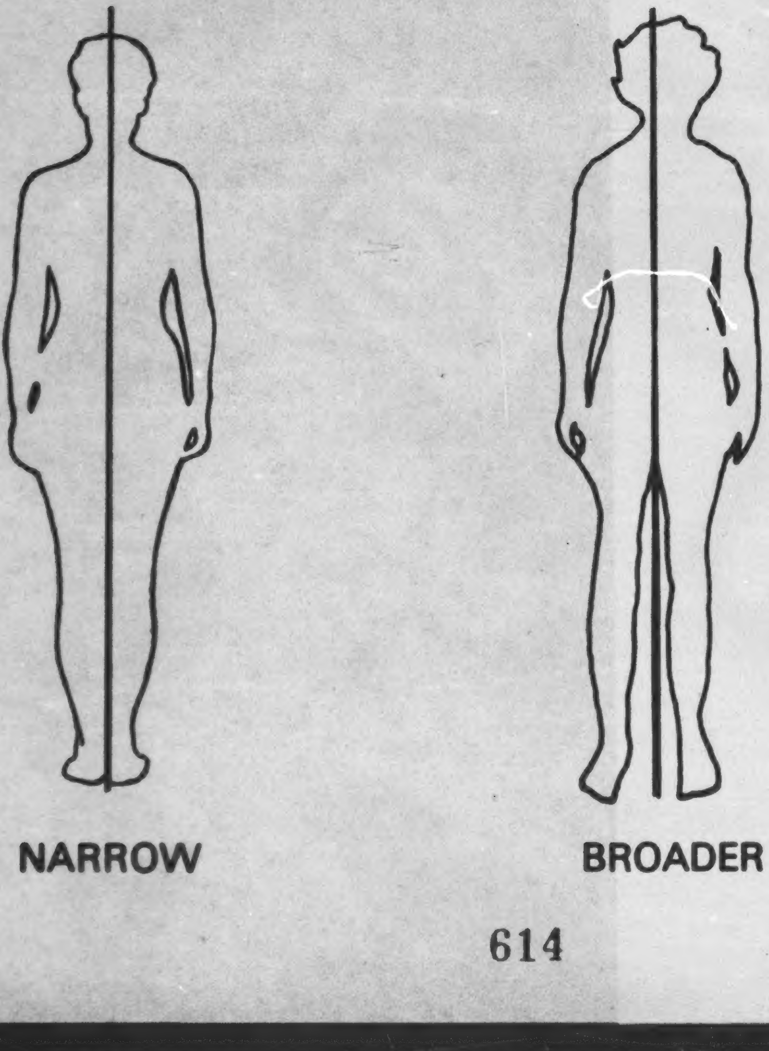
INFORMATION SHEET

H. Whenever possible, use mechanical devices to lift and turn heavy or helpless patients

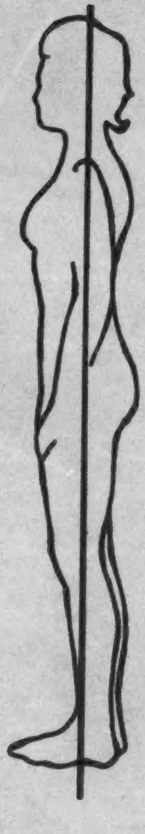
(NOTE: If necessary, have patients move as much as possible by themselves. Hydraulic lifts may be used in moving patients from bed to wheelchair; an extra sheet under the patient's body may be used in moving the patient to the side or head of the bed or in turning him or her.)

I. Adjust height of bed to working level

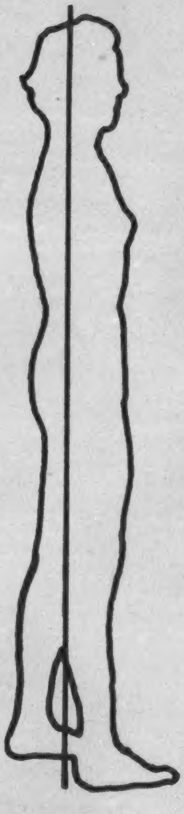
Base of Support Anterior View


NARROW
BROADER

Base of Support
Lateral View

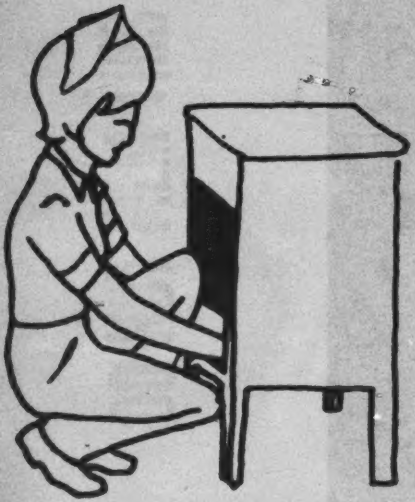


NARROW

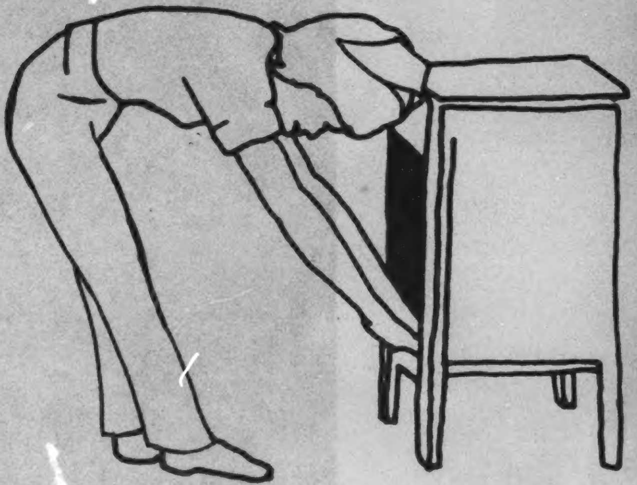


BROAD

Alignment
Correct and Incorrect

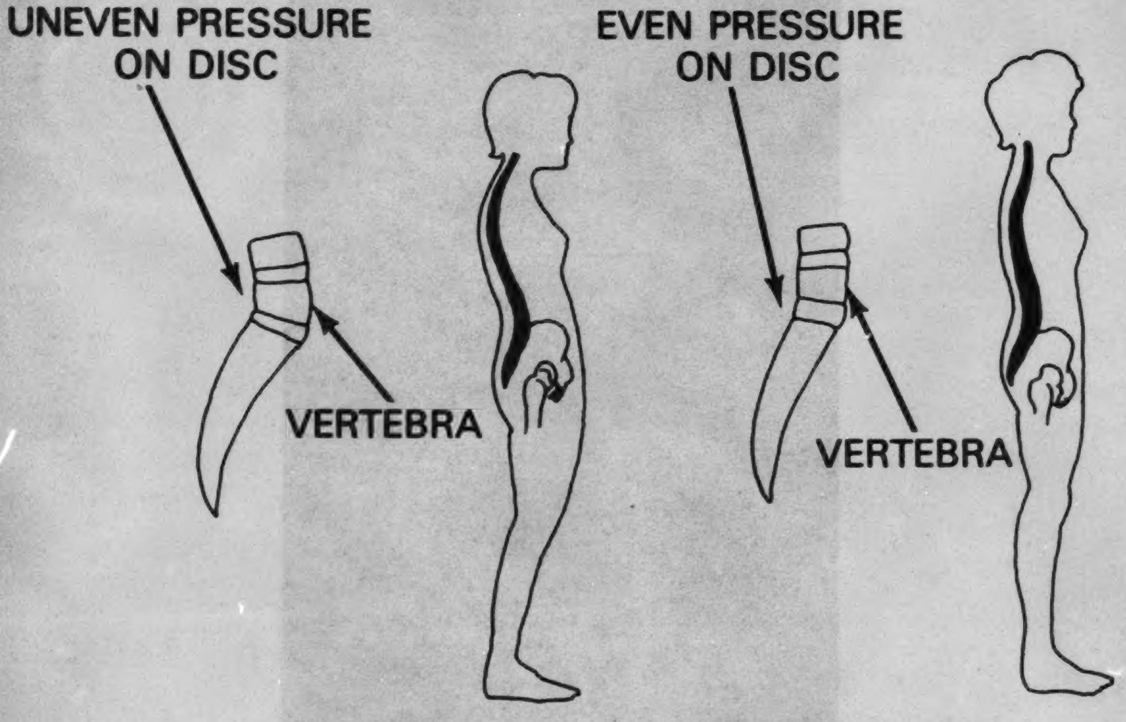


CORRECT ALIGNMENT



INCORRECT ALIGNMENT

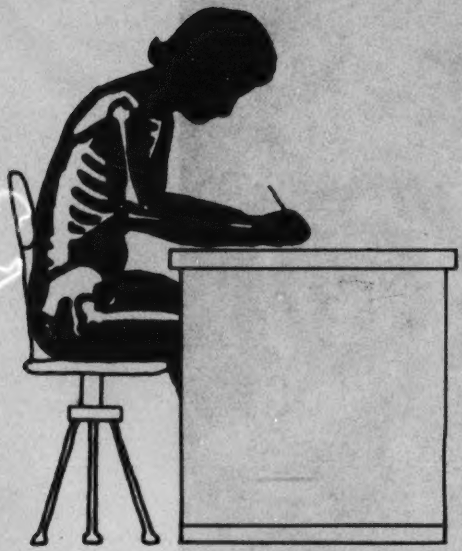
Posture: Standing


UNEVEN PRESSURE ON DISC
VERTEBRA
EVEN PRESSURE ON DISC
VERTEBRA

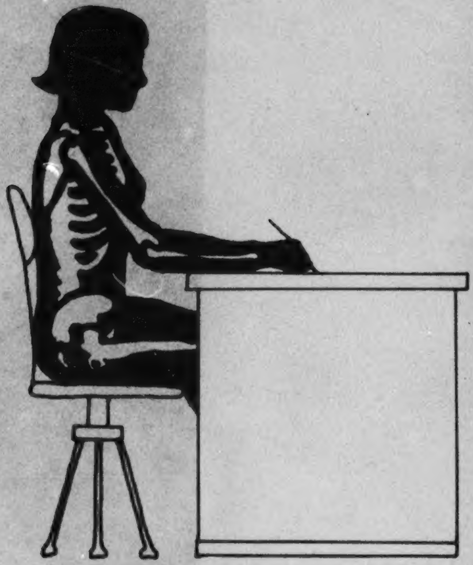
POOR

GOOD

Posture: Sitting

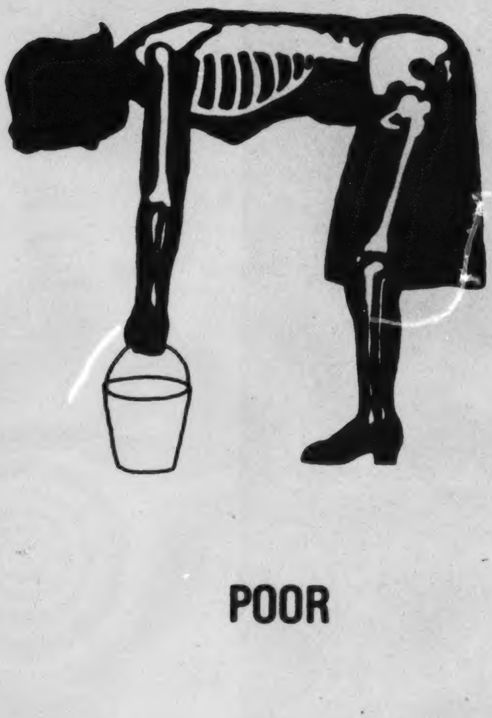


POOR

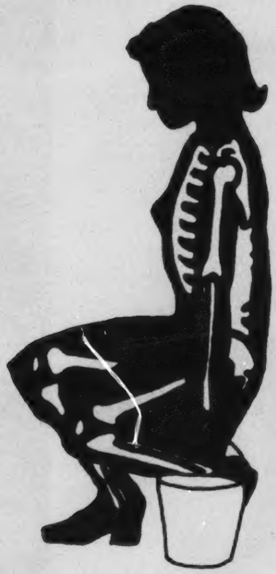


GOOD

Lifting Correctly and Incorrectly



POOR



GOOD

THE PATIENT'S ENVIRONMENT
UNIT IV

JOB SHEET #1–PREPARE A PATIENT UNIT

I. Equipment

- A. Closed bed
- B. Overbed table
- C. Chair
- D. Communication device
- E. Other equipment as provided or required
- F. Bedside table containing
  1. Gown
  2. Bath blanket
  3. Bath towel
  4. Hand towel
  5. Washcloth
  6. Washbasin
  7. Soap in soap dish
  8. Emesis basin
  9. Bedpan
  10. Urinal
- G. Pitcher and glass
- H. Tissues

II. Procedure

- A. Make closed bed if not already made
- B. Make open bed if patient is waiting to be admitted
- C. Check bedside table to see that equipment is complete
- D. Arrange unit attractively

JOB SHEET #1

III. Checklist for preparing a patient unit

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ______________________		
B.	Made closed bed correctly, if not already made	☐	☐
	Comments: ______________________		
C.	Made open bed if patient was being admitted	☐	☐
	Comments: ______________________		
D.	Checked bedside table to see that equipment was complete	☐	☐
	Comments: ______________________		
E.	Arranged unit attractively	☐	☐
	Comments: ______________________		

THE PATIENT'S ENVIRONMENT
UNIT IV

JOB SHEET #2--ADMIT A PATIENT

I. Equipment needed

   A. Notepaper and pen

   B. Patient's chart

   C. Stethoscope

   D. Sphygmomanometer

   E. Clinical thermometer

   F. Specimen container and label

   G. Scales

II. Procedure

   A. Prepare the unit

      1. Check for completeness of bedside equipment

      2. Adjust lighting

      3. Fanfold top covers

      4. Obtain patient's gown

   B. Greet patient; introduce yourself

   C. Orient patient to surroundings; introduce patient to others as appropriate

   D. Ask family to wait in lounge or hall until patient is prepared for bed

   E. Provide privacy

   F. Assist patient as necessary to undress and get into bed

   G. Ask patient if he or she has any valuables which have not been checked in

   H. Obtain urine specimen

   I. Take vital signs

   J. Weigh and measure height

JOB SHEET #2

K. While assisting patient, observe the following:

1. Physical condition
2. Mental state
3. Quality and type of ambulation
4. Ability to perform daily living functions

   Example: Eating

5. Condition of skin

   Examples: Rashes, cuts, bruises, or abrasions

6. Presence of vermin

   Examples: Lice, ticks

7. Any other symptoms

L. Make patient comfortable; position communication device conveniently

M. Provide fresh drinking water if permitted

N. Allow family to return to room

O. Prepare chart

1. Put name of patient and physician and room number on chart holder
2. Write necessary information on page headings
3. Fill in necessary admission records and forms
4. Record observations including
   - a. Opening statement giving patient's age, brief description of physical condition, and reason for admission
   - b. Vital signs
   - c. Weight and height
   - d. Patient's physical and mental condition
   - e. Allergies and other known disorders

PN I - 271-C

JOB SHEET #2

III. Checklist for admitting a patient

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________________________		
B. Checked completeness of bedside equipment	☐	☐
Comments: ______________________________		
C. Adjusted lighting	☐	☐
Comments: ______________________________		
D. Fanfolded top covers	☐	☐
Comments: ______________________________		
E. Obtained patient's gown	☐	☐
Comments: ______________________________		

JOB SHEET #2

Performed well — Needs improvement

F. Greeted patient and made personal introductions ☐ ☐

Comments: ______________________________

____

____

G. Oriented patient to surroundings; introduced patient to others as appropriate ☐ ☐

Comments: ______________________________

____

____

H. Asked family to wait in lounge or hall until patient was prepared for bed ☐ ☐

Comments: ______________________________

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I. Provided privacy ☐ ☐

Comments: ______________________________

____

____

J. Assisted patient as necessary to undress and get into bed ☐ ☐

Comments: ______________________________

____

____

PN I - 273-C

JOB SHEET #2

		Performed well	Needs improvement
K.	Asked patient if he/she had any valuables that had not been checked in	☐	☐
	Comments: ____________________ ____________________ ____________________		
L.	Obtained urine specimen	☐	☐
	Comments: ____________________ ____________________ ____________________		
M.	Took vital signs	☐	☐
	Comments: ____________________ ____________________ ____________________		
N.	Weighed patient and measured height	☐	☐
	Comments: ____________________ ____________________ ____________________		
O.	Observed physical condition, mental state, quality and type of ambulation, ability to perform daily living functions, condition of skin, presence of vermin, and any other symptoms of patient	☐	☐
	Comments: ____________________ ____________________ ____________________		

JOB SHEET #2

		Performed well	Needs improvement
P.	Made patient comfortable; positioned communication device conveniently	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
Q.	Provided fresh drinking water if permitted	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
R.	Allowed family to return to room	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
S.	Put name of patient, physician, and room number on chart holder	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
T.	Wrote necessary information on page headings	☐	☐

Comments: ______________________________

____

____

JOB SHEET #2

		Performed well	Needs improvement
U.	Filled in necessary admission records and forms	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
V.	Recorded observations including patient's age, brief description of physical condition, reason for admission, vital signs, weight and height, physical and mental condition, allergies, and other known disorders	☐	☐

Comments: ______________________________

____

____

THE PATIENT'S ENVIRONMENT
UNIT IV

JOB SHEET #3--TAKE HEIGHT AND WEIGHT (ADULT AND INFANT)

I. Equipment

  A. Scales

  (NOTE: There are a variety of scales available. Learn to use the scales in your office so that you will be assured of accuracy.)

  B. Measuring device

  (NOTE: On most standard scales there is a device fastened to the scale to measure height. Infants are usually measured with a tape.)

  C. Chart or paper

II. Procedure for taking height (adult)

  A. Instruct patient to stand on scales

  (NOTE: Height will be more accurate if shoes are removed.)

  B. Move the measuring device up (Figure 1)

FIGURE 1

  C. Instruct patient to stand as straight as possible

  D. Move the measuring device to top of patient's head

  E. Write the number seen on the measuring device on the proper form

  (NOTE: Height will be written in inches.)

JOB SHEET #3

III. Procedure for taking height (infant)

A. Lay infant on table, making sure that you hold securely

B. Use tape measure secured to table or hold tape, from the top of the infant's head to the feet, making sure that the child is lying flat (Figure 2)

(NOTE: This will take some skill, as an infant is very active, and it may be difficult to keep the child in this position for any length of time.)

FIGURE 2

C. Write this number on the proper form

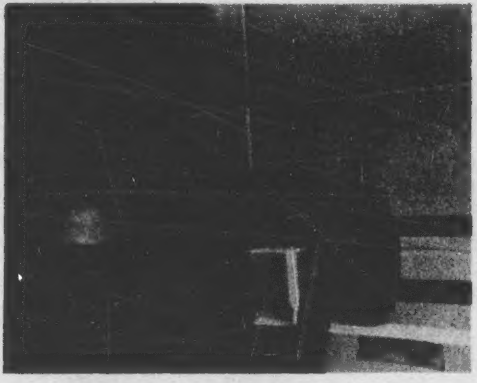
IV. Procedure for taking weight (adult)

A. Balance scales

B. Weigh patient each time with approximately the same amount of clothes on, or in a gown, depending on policy in your office

C. Move the slide for the number of pounds to an approximate number to the right (Figure 3)

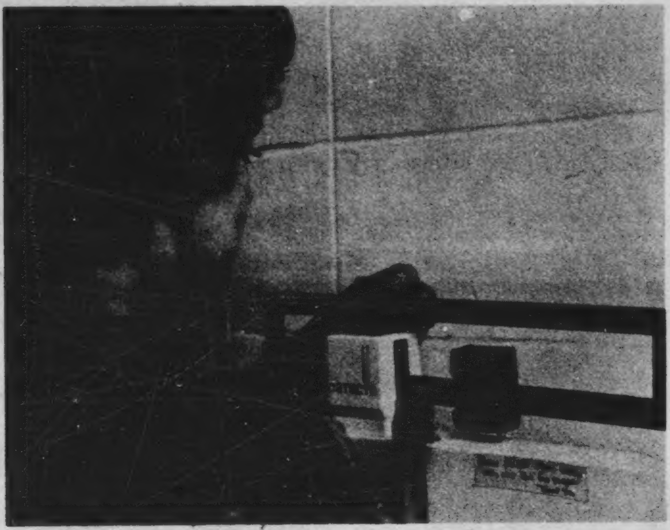
FIGURE 3



JOB SHEET #3

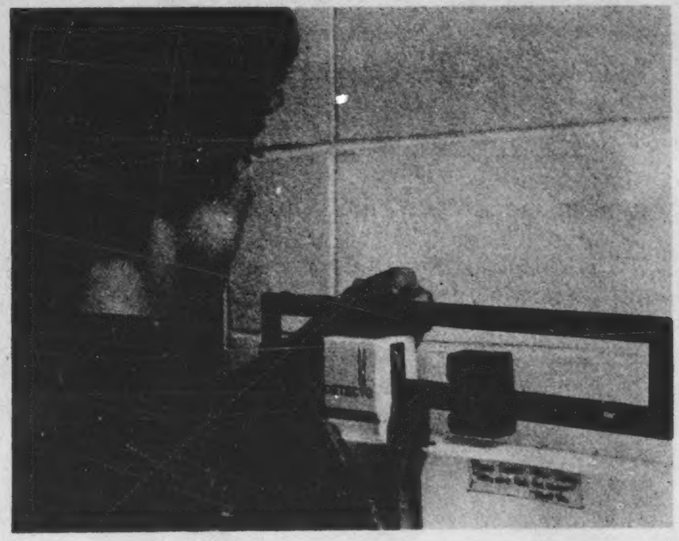
D. Move the slide to the number of ounces to the right (Figure 4)

FIGURE 4



E. Adjust the scale slides until you can see that they balance (Figure 5)

FIGURE 5



F. Write that number on the proper form

JOB SHEET #3

V. Procedure for taking weight (infant)

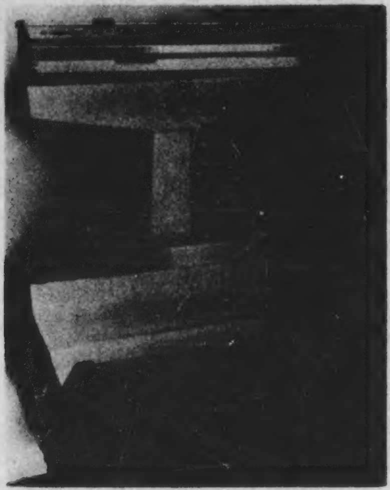
A. Balance scales

B. Remove all clothing, except diaper, from child

C. Place a disposable pad on scale

(NOTE: Hold child securely when you place on scale [Figure 6].)

FIGURE 6



D. Move slides along until you can see that the scale balances

(NOTE: Try to move quickly as infant will be moving actively. Be sure not to press on scale, as this will make reading inaccurate.)

E. Write that number on the proper form

(NOTE: Usually at the age of 20 months, or if the child can stand alone, the adult scale can be used.)

JOB SHEET #3

VI. Checklist for taking height and weight (adult and infant)

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
B. To take adult's height, instructed patient to stand on scales	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
C. Moved measuring device up and instructed patient to stand as straight as possible	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
D. Moved the measuring device to top of patient's head	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
E. Wrote the correct measurement number seen on the proper form	☐	☐

Comments: ____________________

____

____

JOB SHEET #3

	Performed well	Needs improvement
F. To take infant's height, laid infant on table and made sure that the infant was held securely	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
G. Used tape measure attached to table or held tape from the top of infant's head to feet and made sure infant was lying flat	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
H. Wrote correct measurement number on proper form	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
I. To weigh adult, balanced scales	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
J. Weighed patient each time with approximately the same amount of clothes on, or in a gown, according to office policy	☐	☐

Comments: ______________________________

____

____

JOB SHEET #3

	Performed well	Needs improvement
K. Moved slide for number of pounds to an approximate number to the right	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
L. Moved the slide to the number of ounces to right	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
M. Adjusted scale slides until they were balanced	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
N. Wrote the number on the proper form	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
O. To weigh infant, balanced scales	☐	☐

Comments: ______________________________

____

____

JOB SHEET #3

		Performed well	Needs improvement
P.	Removed all clothing from infant except diaper	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
Q.	Placed disposable pad on scale and held child securely when placed on scale	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
R.	Moved slides along until scale was balanced	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
S.	Wrote the number on the proper form	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		

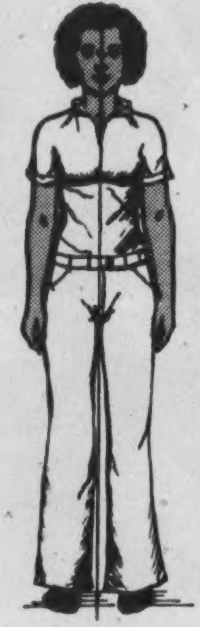
THE PATIENT'S ENVIRONMENT
UNIT IV

JOB SHEET #4--APPLY PRINCIPLES OF BODY MECHANICS

(NOTE: The use of good body mechanics is imperative for the protection of the nurse and the patients in his or her care. Correct methods of standing, sitting, bending, lifting, and reaching should be practiced and used daily, not only on the job but at home as well. Practice the steps below and have a classmate evaluate your use of body mechanics.)

I. Standing (Figure 1)

FIGURE 1



A. Stand erect with arms close to sides and hanging straight down

B. Hold head erect, shoulders, back, and chest slightly out

C. Pull up buttocks and hold in abdomen

D. Make sure knees are slightly flexed

E. Point feet forward and stand with feet slightly apart, giving a broad base of support

(NOTE: Body should be relaxed in this position and it can be assumed for long periods of time without fatigue.)

JOB SHEET #4

II. Sitting (Figures 2 and 3)

FIGURE 2

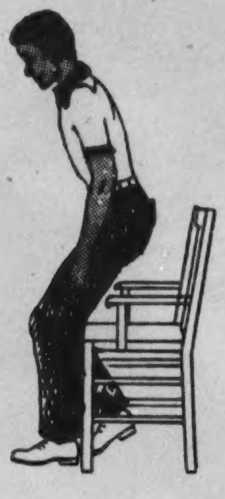
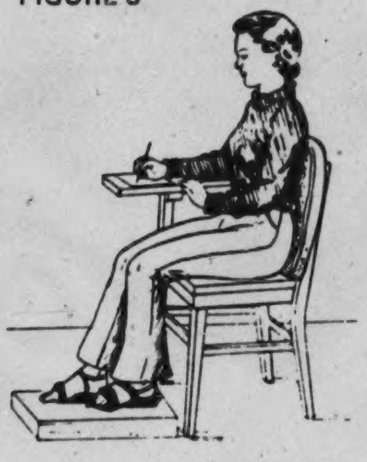


FIGURE 3



A. Stand close to the chair and place a foot under it to broaden base of support

B. Lower body and shift weight of trunk towards the back

C. Hold vertebrae as straight as possible

D. Rest feet flat on floor

(NOTE: Crossing legs will hamper circulation and may cause problems in lower legs and feet.)

E. Make sure that the chair is high or low enough so that the feet can rest flat on the floor

(NOTE: If necessary, a firm cushion may be placed in chair to correct any undesired slant that may occur, causing the body to slide forward or backward.)

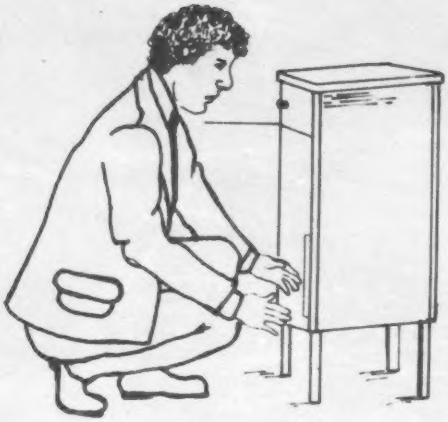
F. Make sure the seat is deep enough to sit all the way back in the chair

G. Sit with one foot forward to add stability when moving towards the desk

JOB SHEET #4

III. Bending and lifting (Figure 4)

FIGURE 4



A. Lower body toward floor, keeping the spine in good alignment

(NOTE: Hips and knees should be flexed, with the work done by muscles in the legs.)

B. Place feet slightly apart to provide a wide base of support and to provide good balance

C. Make sure you have a secure hold with both hands when lifting objects

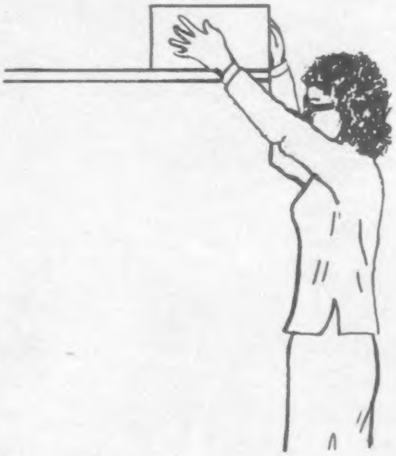
(**CAUTION:** Do not lift objects that are too heavy or that are not balanced well. It is better to lift several items or get assistance rather than risk injuring yourself.)

D. Use leg muscles when lifting item from floor up to waist level

(NOTE: Practice lifting different objects from the floor to learn correct movements.)

IV. Reaching (Figure 5)

FIGURE 5



JOB SHEET #4

A. Stand close enough to object to keep a good, solid base of support

B. Place feet slightly apart so that you may pivot body with arms extended to reach object

C. Try to keep back in good alignment while reaching

D. Make sure you have good balance and firm hold on object

E. Use upper arm muscles to bring object down to your level

(NOTE: Practice reaching for objects from several different heights.)

JOB SHEET #4

V. Checklist for applying principles of body mechanics

	Performed well	Needs improvement
A. For standing exercise, stood erect with arms close to sides and hanging straight down	☐	☐
Comments: ____________________ ____________________ ____________________		
B. Held head erect, shoulders, back, and chest slightly out	☐	☐
Comments: ____________________ ____________________ ____________________		
C. Pulled up buttocks and held in abdomen	☐	☐
Comments: ____________________ ____________________ ____________________		
D. Made sure knees were slightly flexed	☐	☐
Comments: ____________________ ____________________ ____________________		
E. Pointed feet forward and stood with feet slightly apart, giving a broad base of support	☐	☐
Comments: ____________________ ____________________ ____________________		

JOB SHEET #4

		Performed well	Needs improvement
F.	For sitting exercise, stood close to chair and placed one foot under it to broaden base of support	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		
G.	Lowered body and shifted weight of trunks towards the back	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		
H.	Held vertebrae as straight as possible	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		
I.	Rested feet flat on floor	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		
J.	Made sure that the chair was high or low enough so that the feet could rest flat on floor	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		

JOB SHEET #4

		Performed well	Needs improvement
K.	Made sure that seat was deep enough to sit all the way back in the chair	☐	☐
	Comments: ____________________		
L.	Sat with one foot forward to add stability when moving towards the desk	☐	☐
	Comments: ____________________		
M.	For bending and lifting, lowered body toward floor and kept spine in good alignment	☐	☐
	Comments: ____________________		
N.	Placed feet slightly apart to provide a broad base of support and good balance	☐	☐
	Comments: ____________________		
O.	Had a secure hold with both hands when lifting objects	☐	☐
	Comments: ____________________		

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JOB SHEET #4

		Performed well	Needs improvement
P.	Used leg muscles when lifting item from floor up to waist level	☐	☐

Comments: ____________________

____

____

Q.	For reaching, stood close enough to object to keep a good, solid base of support	☐	☐

Comments: ____________________

____

____

R.	Placed feet slightly apart so that body could pivot with arms extended to reach object	☐	☐

Comments: ____________________

____

____

S.	Kept back in good alignment while reaching	☐	☐

Comments: ____________________

____

____

T.	Had good balance and firm hold on object	☐	☐

Comments: ____________________

____

____

JOB SHEET #4

	Performed well	Needs improvement
U. Used upper arm muscles to bring object down to proper level	☐	☐

Comments: ______________________________

THE PATIENT'S ENVIRONMENT
UNIT IV

JOB SHEET #5--MAKE AN UNOCCUPIED BED AND AN OPEN BED

I. Equipment

A. Bed pad or mattress cover

B. Two large sheets

(NOTE: Fitted bottom sheets are used in some institutions.)

C. Waterproof drawsheet

D. Cotton drawsheet

(NOTE: Drawsheets may not be used in some hospitals or may only be used in special instances.)

E. Blanket, if needed

F. Pillowcases

G. Bedspread

II. Procedure for unoccupied or closed bed

A. Adjust bed to convenient level with bed flat

B. Put mattress pad on the mattress

C. Place bottom sheet on the bed

1. With hem even with the foot of the mattress
2. With middle of sheet near the center of the bed
3. With enough of sheet to tuck under head of mattress so the sheet will remain tucked in place

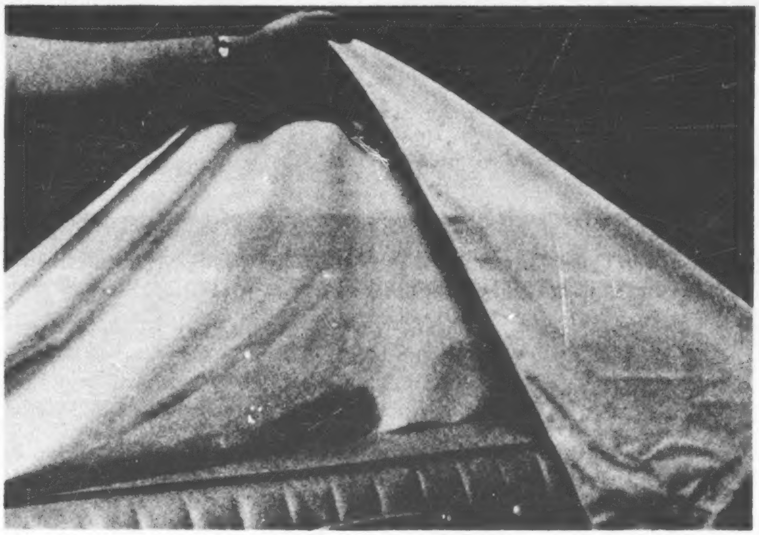
D. Tuck sheet smoothly under head of mattress

JOB SHEET #5

E. Make a mitered corner at head of mattress

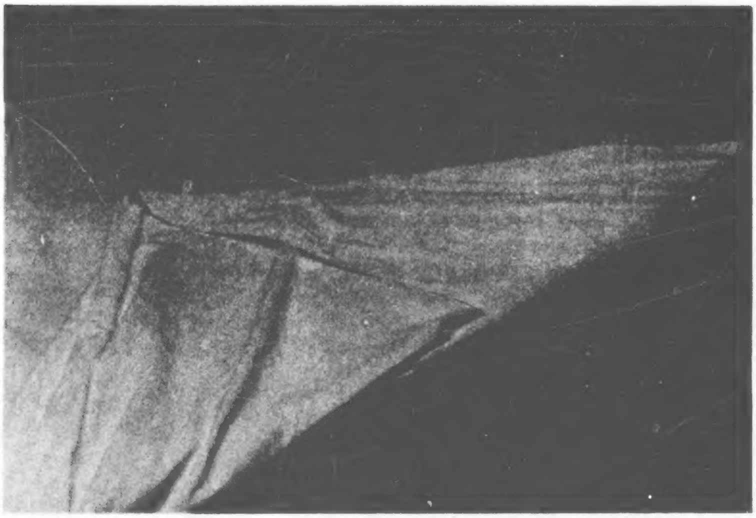
1. Pick up edge of sheet so it forms a triangle with the side edge of the sheet held perpendicular to the mattress (Figure 1)

FIGURE 1



2. Lay folded corner on mattress (Figure 2)

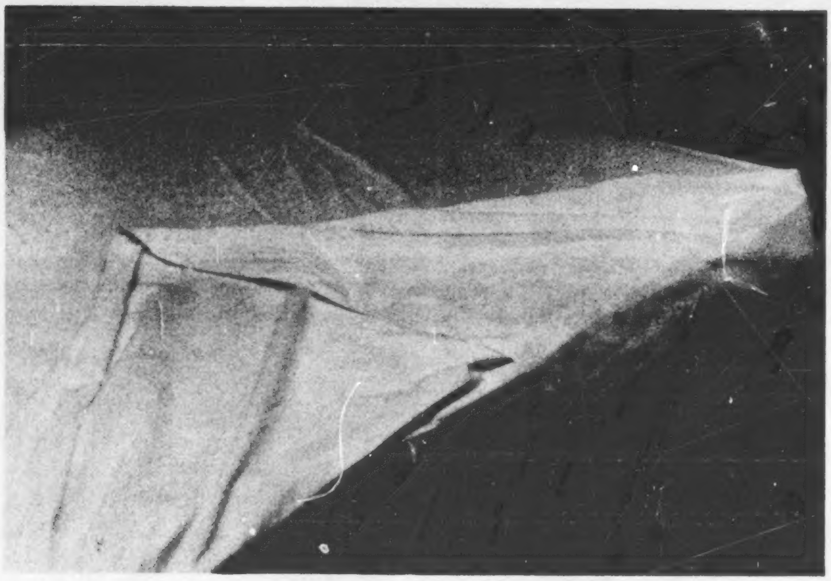
FIGURE 2



JOB SHEET #5

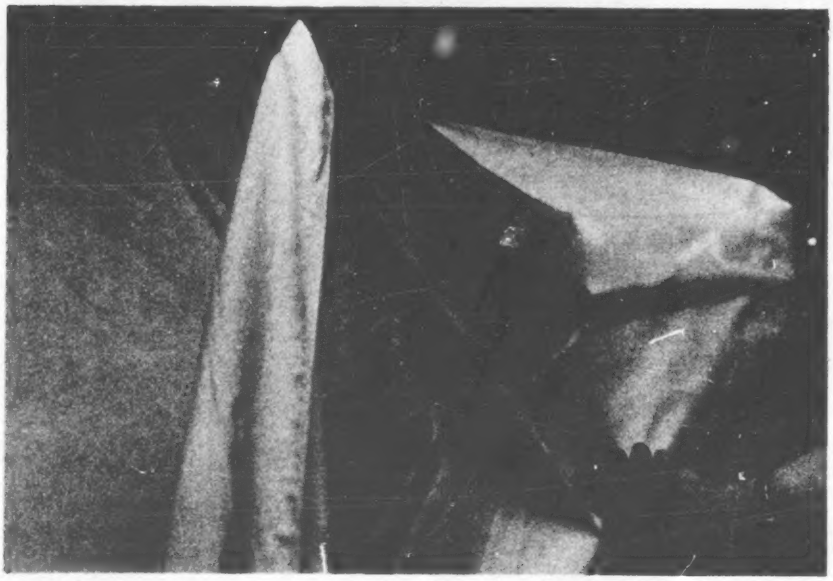
3. Tuck hanging part under mattress (Figure 3)

FIGURE 3



4. Hold sheet in place against mattress; with other hand, pick up corner of folded part from top of mattress and drop down, smoothing the corner (Figure 4)

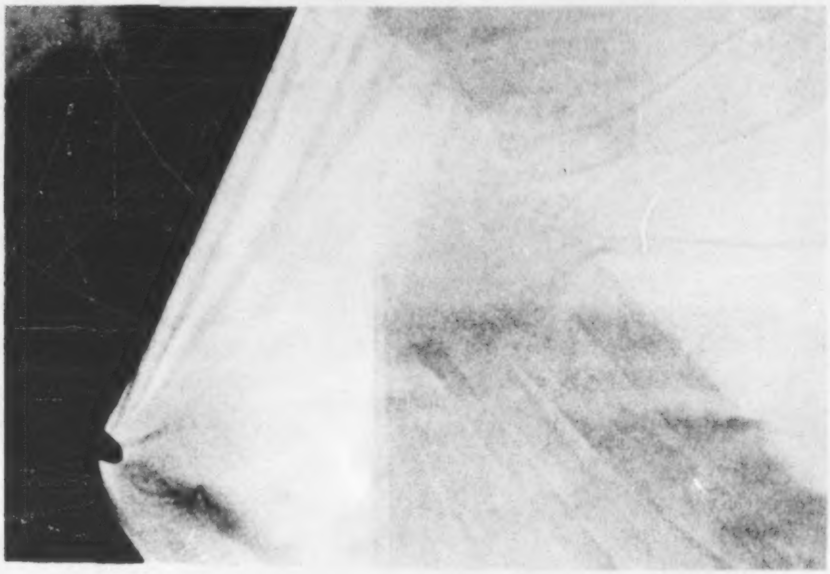
FIGURE 4



JOB SHEET #5

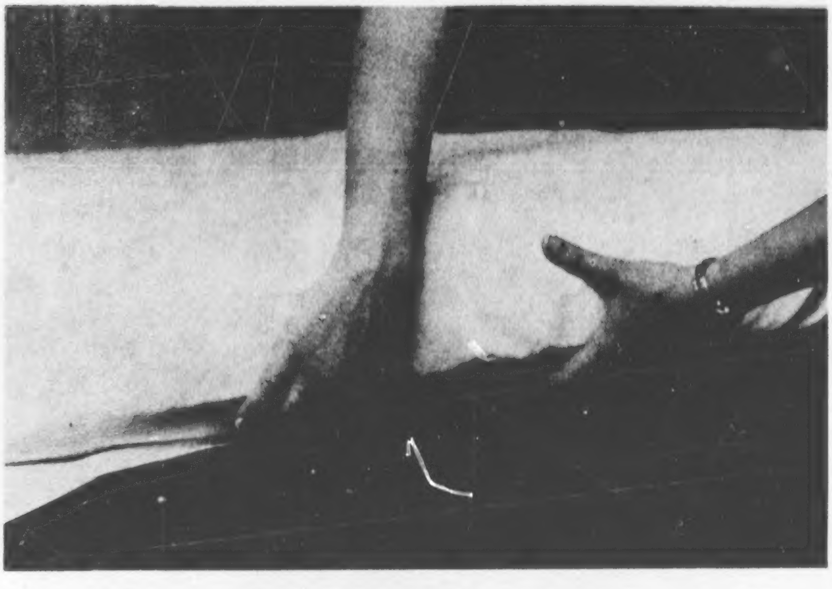
5. Drop corner of sheet over side of mattress (Figure 5)

FIGURE 5



6. Tuck sheet under mattress along the side from head to foot (Figure 6)

FIGURE 6



(NOTE: If using a contour sheet with elasticized corners, make sure that all corners are secure around mattress and that sides are tucked in securely.)

JOB SHEET #5

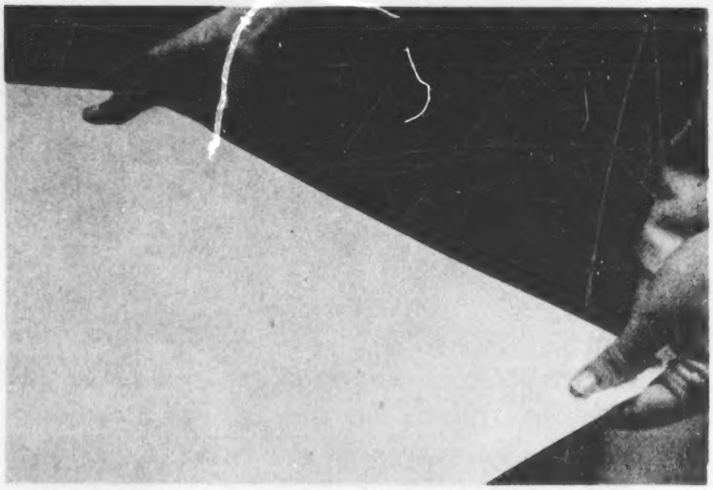
F. Place center of waterproof sheet at center of bed with upper edge about 16" from head of mattress

G. Place cotton drawsheet over waterproof sheet with cotton sheet extending over each side of rubber sheet

H. Tuck both drawsheets under mattress

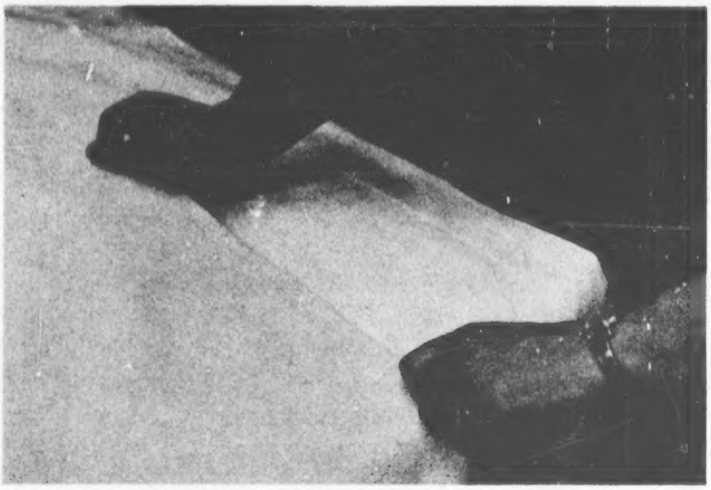
I. Place and unfold top sheet, wrong side up and hem even with top edge of mattress (Figure 7)

FIGURE 7



J. Place blanket on top of sheet with upper edge six inches from top edge of mattress (Figure 8)

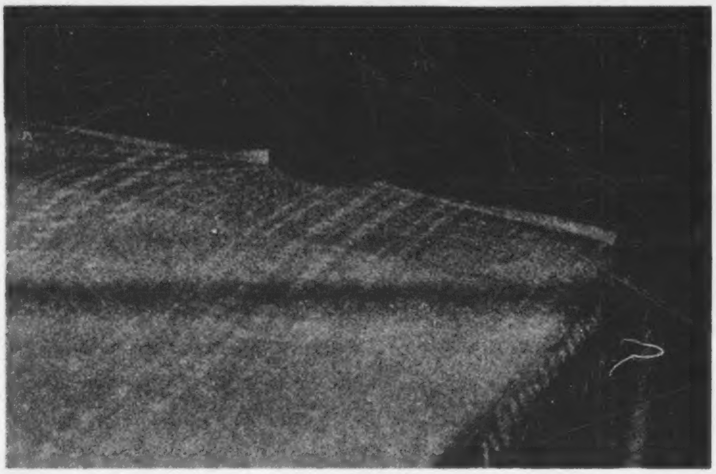
FIGURE 8



JOB SHEET #5

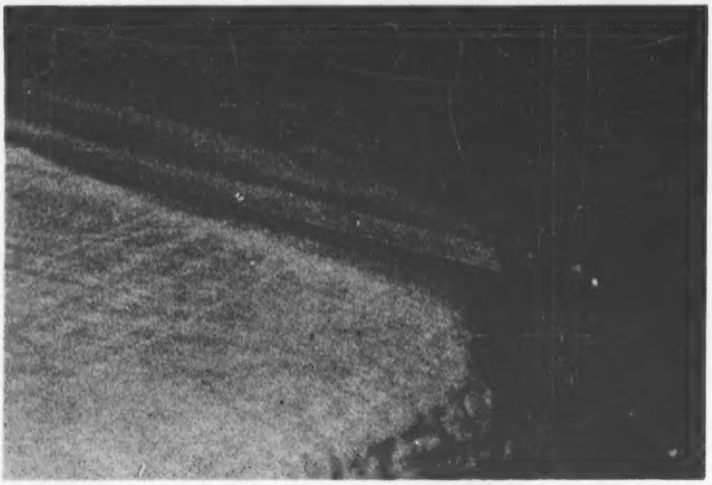
K. Place spread on bed even with top edge of mattress (Figure 9)

FIGURE 9



L. Fold top of sheet down over top of blanket and spread (Figure 10)

FIGURE 10



M. Tuck top sheet, blanket, and spread under mattress at foot of bed

JOB SHEET #5

N. Miter corner, allowing sides to hang down

O. Move to the other side of the bed to complete making the bed

P. Fold linen to center of bed

Q. Tuck bottom sheet smoothly under head of mattress, mitering top corner; tuck under tightly along the side

R. Grasp edge of rubber sheet, pulling it tight and tuck under mattress

S. Tuck cotton drawsheet under mattress in same manner

T. Straighten top sheet, blanket, and spread; move to foot of bed to tuck in top sheet, blanket, and spread

U. Miter corners together, letting sides hang free

V. Put case on pillow

W. Place pillow at head of bed with open end away from door (Figure 11)

FIGURE 11

JOB SHEET #5

III. Procedure for open bed

A. Proceed as for closed bed, steps A through V

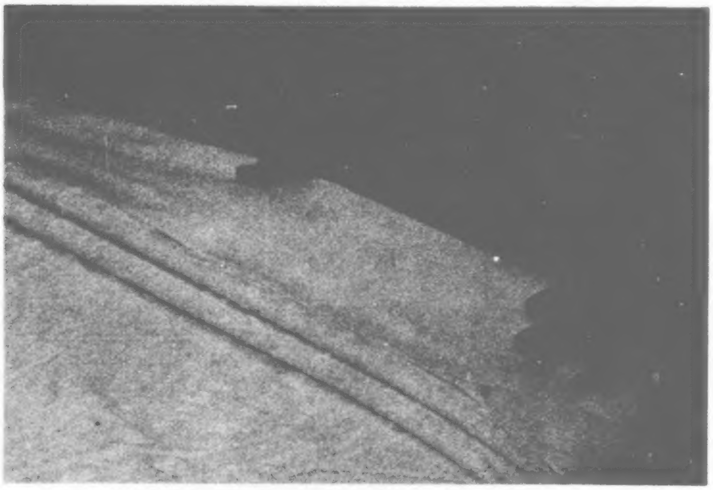
B. Fold top of bedspread over top edge of blanket

C. Fold top edge of sheet down over top edge of blanket and folded spread

D. Fanfold top covers toward the foot of the bed (Figure 12)

(NOTE: Follow hospital's procedure for folding back top linens.)

FIGURE 12



E. Place pillow at head of bed with open edge away from door

JOB SHEET #5

IV. Checklist for making an unoccupied bed and an open bed

		Performed well	Needs improvement
A.	Gathered necessary equipment to make unoccupied bed	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
B.	Adjusted bed to convenient level with bed flat	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
C.	Put mattress pad on mattress	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
D.	Placed bottom sheet on the bed with hem even with the foot of the mattress and middle of the sheet near the center of the bed	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
E.	Left enough of sheet to tuck under head of mattress so that sheet would remain tucked in place	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		

JOB SHEET #5

		Performed well	Needs improvement
F.	Tucked sheet smoothly under head of mattress	☐	☐

Comments: ____

____

____

		Performed well	Needs improvement
G.	Made mitered corner correctly at head of mattress, following steps in job sheet	☐	☐

Comments: ____

____

____

		Performed well	Needs improvement
H.	Placed center of waterproof sheet at center of bed with upper edge approximately 16" from head of mattress	☐	☐

Comments: ____

____

____

		Performed well	Needs improvement
I.	Placed cotton drawsheet over waterproof sheet properly and tucked both drawsheets under mattress	☐	☐

Comments: ____

____

____

		Performed well	Needs improvement
J.	Placed and unfolded top sheet, wrong side up and hem even with top edge of mattress	☐	☐

Comments: ____

____

____

JOB SHEET #5

		Performed well	Needs improvement
K.	Placed blanket on top of sheet with upper edge six inches from top edge of mattress	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
L.	Placed spread on bed even with top edge of mattress	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
M.	Folded top of sheet down over top of blanket and spread	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
N.	Tucked top sheet, blanket, and spread under mattress at foot of bed	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
O.	Mitered corner correctly and allowed side to hang down	☐	☐

Comments: ______________________________

____

____

JOB SHEET #5

		Performed well	Needs improvement
P.	Moved to other side of bed to complete making the bed	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
Q.	Folded linen to center of bed	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
R.	Tucked bottom sheet smoothly under head of mattress, mitered top corner and tucked under tightly along the side	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
S.	Grasped edge of waterproof sheet, pulled tight and tucked under mattress	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
T.	Tucked cotton drawsheet under mattress in same manner	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		

JOB SHEET #5

		Performed well	Needs improvement
U.	Straightened top sheet, blanket, and spread; moved to foot of bed to tuck in top sheet, blanket, and spread	☐	☐
	Comments: ______________________________		
V.	Mitered corners together correctly and left sides hanging free	☐	☐
	Comments: ______________________________		
W.	Put case on pillow	☐	☐
	Comments: ______________________________		
X.	Placed pillow at head of bed with open end away from door	☐	☐
	Comments: ______________________________		
Y.	To make open bed, completed steps A-V the same as for closed bed	☐	☐
	Comments: ______________________________		

JOB SHEET #5

		Performed well	Needs improvement
Z.	Folded top of bedspread over top edge of blanket	☐	☐
	Comments: ________________________________		
AA.	Folded top edge of sheet down over top edge of blanket and folded spread	☐	☐
	Comments: ________________________________		
BB.	Fanfolded top covers toward foot of bed and placed pillow at head of bed with open edge away from door	☐	☐
	Comments: ________________________________		

THE PATIENT'S ENVIRONMENT
UNIT IV

JOB SHEET #6--MAKE AN OCCUPIED BED

I. Equipment needed

- A. Sheet
- B. Drawsheet
- C. Spread
- D. Pillowcase
- E. Bath blanket
- F. Receptacle for soiled linen

II. Procedure

- A. Wash hands
- B. Select linen and take it to the patient's unit, placing it on a chair
- C. Inform patient of procedure and provide privacy; adjust side rails if necessary

  (NOTE: Use good body mechanics throughout procedure.)

- D. Loosen top covers at the foot of the bed
- E. Place bath blanket over the patient and the top covers
- F. Have patient hold bath blanket or tuck it under his or her shoulders to keep it in place
- G. Reach under the bath blanket and fanfold the top covers to the foot of the bed
- H. Remove spread

  (NOTE: If spread is to be used again, fold it with the hems together; then fold in half, edges together, and in half again. Hang over back of chair. If spread is not to be used, place it in linen receptacle.)

- I. Remove blanket and fold in same manner as spread
- J. Remove top sheet and fold for reuse in same manner as spread was folded

JOB SHEET #6

K. Move mattress to head of bed with or without assistance

(NOTE: When lifting or moving patients, it is essential to use good body mechanics. Use longest and strongest muscles. If help is needed, obtain it before attempting to move the patient. Before moving patient and/or mattress to the head of the bed, place mattress in flat position and lock the wheels of the bed. Depending on the condition of the patient, the nurse should then select one of the following procedures.)

1. Procedure to move mattress and patient to head of bed with patient assistance
    a. Ask patient to grasp the side rails or the head of the bed
    b. While patient is pulling toward head of bed, push at foot of mattress
2. Procedure to move mattress and patient without assistance, requiring two nursing personnel
    a. One person stands at each side of the mattress
    b. Grasp each side of mattress firmly and on count of three, move mattress to head of bed
3. Procedure to move patient to head of bed with patient assistance
    a. Ask patient to grasp the side rails or the head of the bed
    b. Nurse slides one arm under lower curve of patient's back and other arm under patient's thighs
    c. While patient pulls, nurse lifts and slides patient to head of bed
4. Procedure to move patient without patient assistance, requiring two persons
    a. One person stands near the patient's head, placing one arm under patient's neck and shoulders, and one arm under the middle of patient's back
    b. Second person places one arm under patient's back and other arm under patient's thighs
    c. At prearranged signal, both persons move the patient toward head of bed

L. Assist patient to turn to opposite side of bed which is to be made first; adjust side rails if necessary

M. Loosen linens on side of bed to be made, folding or rolling each piece separately and as close to patient as possible

JOB SHEET #6

N. Straighten mattress pad

O. Put used top sheet on mattress with center fold near center of bed; tuck under mattress making mitered corner at top

P. Fanfold other half of sheet and tuck it as close to patient as possible

Q. Unfold waterproof sheet, straighten, and pull tight; tuck under mattress

R. Unfold drawsheet, leaving it folded in half from top to bottom; place center fold near center of bed; tuck one side under mattress

S. Fanfold other half of drawsheet close to patient

T. Move patient to clean side of bed; adjust bath blanket to keep patient covered; adjust side rails if necessary

U. Move to other side of bed; remove soiled linen and place in proper receptacle

V. Tuck in clean linen snugly and in proper sequence

W. Move patient to center of bed

X. Unfold top sheet over bath blanket

Y. Remove bath blanket, fold, and put away

Z. Place blanket and spread over patient

AA. Tuck linens in at foot of bed, making mitered corners as in unoccupied bed

BB. Loosen bed covers over patient's feet by grasping covers over toes and pulling them up gently

CC. Adjust side rails if necessary

DD. Position patient's communication device within his or her reach

EE. Remove soiled linen

JOB SHEET #6

III. Checklist for making an occupied bed

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________________________		
B. Washed hands correctly	☐	☐
Comments: ______________________________		
C. Selected proper linen; took it to the patient's unit, and placed it on a chair	☐	☐
Comments: ______________________________		
D. Informed patient of procedure and provided privacy; adjusted side rails if necessary	☐	☐
Comments: ______________________________		
E. Loosened top covers at the foot of the bed	☐	☐
Comments: ______________________________		

JOB SHEET #6

		Performed well	Needs improvement
F.	Placed bath blanket over the patient and the top covers	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
G.	Had patient hold bath blanket or tucked it under patient's shoulders to keep it in place	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
H.	Reached under bath blanket and fanfolded the top covers to the foot of the bed	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
I.	Removed spread	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
J.	Removed blanket and top sheet and folded in same manner as spread for reuse	☐	☐

Comments: ____________________

____

____

JOB SHEET #6

		Performed well	Needs improvement
K.	Moved mattress to head of bed with or without assistance according to correct procedures (NOTE: See Job Sheet #6, step K.)	☐	☐

Comments: ____

		Performed well	Needs improvement
L.	Assisted patient to turn to opposite side of bed which was to be made first and adjusted side rails if necessary	☐	☐

Comments: ____

		Performed well	Needs improvement
M.	Loosened linens on side of bed to be made; folded and rolled each piece separately and as close to patient as possible	☐	☐

Comments: ____

		Performed well	Needs improvement
N.	Straightened mattress pad	☐	☐

Comments: ____

		Performed well	Needs improvement
O.	Put used top sheet on mattress with center fold near center of bed; tucked under mattress making mitered corner at top	☐	☐

Comments: ____

JOB SHEET #6

	Performed well	Needs improvement
P. Fanfolded other half of sheet and tucked it as close to patient as possible	☐	☐

Comments: ____________________

____

____

Q. Unfolded waterproof sheet; straightened and pulled tight; tucked under mattress	☐	☐

Comments: ____________________

____

____

R. Unfolded drawsheet, leaving it folded in half from top to bottom; placed center fold near center of bed; tucked one side under mattress	☐	☐

Comments: ____________________

____

____

S. Fanfolded other half of drawsheet close to patient	☐	☐

Comments: ____________________

____

____

T. Moved patient to clean side of bed; adjusted bath blanket to keep patient covered; adjusted side rails if necessary	☐	☐

Comments: ____________________

____

____

JOB SHEET #6

	Performed well	Needs improvement
U. Moved to other side of bed; removed soiled linen and placed in proper receptacle	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
V. Tucked in clean linen snugly and in proper sequence	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
W. Moved patient to center of bed	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
X. Unfolded top sheet over bath blanket	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
Y. Removed bath blanket; folded and put away	☐	☐

Comments: ____________________

____

____

JOB SHEET #6

	Performed well	Needs improvement
Z. Placed blanket and spread over patient	☐	☐
Comments: ____________________		
AA. Tucked linens in at foot of bed, making mitered corners as in unoccupied bed	☐	☐
Comments: ____________________		
BB. Loosened bed covers over patient's feet by grasping covers over toes and pulling them up gently	☐	☐
Comments: ____________________		
CC. Adjusted side rails if necessary and positioned communication device within patient's reach	☐	☐
Comments: ____________________		
DD. Removed soiled linen	☐	☐
Comments: ____________________		

THE PATIENT'S ENVIRONMENT
UNIT IV

JOB SHEET #7--MAKE A POSTOPERATIVE BED

I. Equipment needed

- A. Clean linen as for an unoccupied bed
- B. Waterproof and cotton drawsheets or other bed protector
- C. Waterproof pillowcase
- D. Bath blanket
- E. For bedside table
  1. One emesis basin
  2. Toungue depressors
  3. Tissues
  4. Writing pad and pencil
  5. Waste receptacle
  6. Stethoscope
  7. Sphygmomanometer
  8. IV standard

  (NOTE: The patient may have intravenous fluids continuing after surgery. A pole with hooks may be used to elevate and hold containers. These may be part of the bed or free-rolling on wheels.)

II. Procedure

- A. Strip bed and turn mattress if indicated
- B. Put on bottom sheet, waterproof drawsheet, and cotton drawsheet in usual manner
- C. Place second waterproof drawsheet and cotton drawsheet or other bed protector across upper part of mattress so it overlaps first drawsheet if needed

  (NOTE: Disposable underpads may be used to protect bed.)
- D. Place top sheet, blanket, and spread on the bed in the usual way, except do not tuck them in at the foot

JOB SHEET #7

E. Make the cuff of the top bedding in the usual way

F. Fold back top bedding at the foot even with the mattress

G. On the side of the bed where the stretcher can be placed most conveniently, fold back top bedding according to hospital's procedures

H. Place plastic pillowcase and cotton pillowcase on pillow

I. Stand pillow on its side at the head of the bed

J. Take everything, including water glass and pitcher, off the bedside table

K. Arrange emesis basin, tongue depressors, tissues, paper, and pencil conveniently

L. Place waste receptacle and IV standard near bedside

M. Clear pathway for stretcher

Example: Move waste receptacle, IV standard, and bedside table to opposite side of bed

JOB SHEET #7

III. Checklist for making a postoperative bed

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ____________________________________

____

____

	Performed well	Needs improvement
B. Stripped bed and turned mattress if indicated	☐	☐

Comments: ____________________________________

____

____

	Performed well	Needs improvement
C. Put on bottom sheet, waterproof drawsheet, and cotton drawsheet in usual manner	☐	☐

Comments: ____________________________________

____

____

	Performed well	Needs improvement
D. Placed second waterproof drawsheet and cotton drawsheet or other bed protector across upper part of mattress so it overlapped first drawsheet if needed	☐	☐

Comments: ____________________________________

____

____

JOB SHEET #7

	Performed well	Needs improvement
E. Placed top sheet, blanket, and spread on the bed in the usual way, except did not tuck them in at the foot	☐	☐
Comments: ____________________		
F. Made the cuff of the top bedding in the usual way	☐	☐
Comments: ____________________		
G. Folded back top bedding at the foot even with the mattress	☐	☐
Comments: ____________________		
H. On the side of the bed where the stretcher could be placed most conveniently, folded back top bedding according to hospital's procedures	☐	☐
Comments: ____________________		

JOB SHEET #7

		Performed well	Needs improvement
I.	Placed plastic pillowcase and cotton pillowcase on pillow	☐	☐
	Comments: ____________________		
J.	Stood pillow on its side at the head of the bed	☐	☐
	Comments: ____________________		
K.	Took everything, including water glass and pitcher, off the bedside table	☐	☐
	Comments: ____________________		
L.	Arranged emesis basin, tongue depressors, tissue, paper, and pencil conveniently	☐	☐
	Comments: ____________________		
M.	Placed waste receptacle and IV standard near bedside	☐	☐
	Comments: ____________________		

JOB SHEET #7

	Performed well	Needs improvement
N. Cleared pathway for stretcher	☐	☐

Comments: ______________________________

____

____

THE PATIENT'S ENVIRONMENT
UNIT IV

JOB SHEET #8--TRANSFER A PATIENT

(NOTE: Patients in a hospital are transferred to different areas for a variety of reasons. The first step in making a transfer is to follow the hospital's policy for notifying other departments of the change. A notation is made in the nurse's notes that the patient was transferred and the time the transfer was made.)

I. Equipment
    A. Patient's belongings
    B. Mode of transfer
        Examples: Wheelchair, stretcher, or bed
    C. Chart

II. Procedure
    A. Wash hands
    B. Identify patient and explain procedure
    C. Assemble the patient's belongings, including:
        1. All of clothes and personal items
            (NOTE: Check bedside table and clothes closet.)
        2. Dentures, eyeglasses, hearing aid if any
        3. Patient's hospital equipment: bedpan, emesis basin, bath basin, and other items in his or her bedside table
    D. Move the patient and belongings to the new location
        (NOTE: The patient is transferred to another unit in a wheelchair, stretcher, or in the bed.)
    E. Assist the patient into bed
    F. Provide for comfort; position communication device conveniently
    G. Orient patient to new area
    H. Provide drinking water as permitted
    I. Store patient's supplies and clothing
    J. Introduce him or her to others as appropriate

JOB SHEET #8

K. Wash hands

L. Report and record transfer

   1. Note time and mode of transfer and condition of patient

   2. Chart any unusual occurrences

M. Give chart, patient care plan, and medications to charge nurse

N. Give oral report on patient's condition to person in charge

O. Return wheelchair or stretcher to proper place

P. Strip former room of used linens and make necessary arrangements for terminal cleaning of unit

JOB SHEET #8

III. Checklist for transfering a patient

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ____________________		
B. Washed hands correctly	☐	☐
Comments: ____________________		
C. Identified patient and explained procedure	☐	☐
Comments: ____________________		
D. Assembled the patient's belongings	☐	☐
Comments: ____________________		
E. Moved the patient and belongings to the new location	☐	☐
Comments: ____________________		

JOB SHEET #8

	Performed well	Needs improvement
F. Assisted the patient into bed	☐	☐
Comments: ______		
G. Provided for comfort; positioned communication device conveniently	☐	☐
Comments: ______		
H. Oriented patient to new area	☐	☐
Comments: ______		
I. Provided drinking water as permitted	☐	☐
Comments: ______		
J. Stored patient's supplies and clothing	☐	☐
Comments: ______		

JOB SHEET #8

	Performed well	Needs improvement
K. Introduced him or her to others as appropriate	☐	☐
Comments: ____________________ ____________________ ____________________		
L. Washed hands correctly	☐	☐
Comments: ____________________ ____________________ ____________________		
M. Reported and recorded transfer	☐	☐
Comments: ____________________ ____________________ ____________________		
N. Gave chart, patient care plan, and medications to charge nurse	☐	☐
Comments: ____________________ ____________________ ____________________		
O. Gave oral report on patient's condition to person in charge	☐	☐
Comments: ____________________ ____________________ ____________________		

JOB SHEET #8

		Performed well	Needs improvement
P.	Returned wheelchair or stretcher to proper place	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
Q.	Stripped former room of used linens and made necessary arrangements for terminal cleaning of unit	☐	☐

Comments: ______________________________

____

____

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THE PATIENT'S ENVIRONMENT
UNIT IV

JOB SHEET #9--DISCHARGE A PATIENT

(NOTE: Most hospitals have certain policies and rules that must be followed when a patient is to be discharged. A good method of making sure that each step is carried out in the process is to provide a checklist to mark off as the patient completes each step. Again, follow the hospital's policies in notifying each department of the discharge. Most important, the patient should have clear instructions of what to do when he or she goes home.)

I. Equipment

  A. Patient's belongings

  B. Wheelchair

  C. Checklist for patient's home care, if used

II. Procedure

  A. Obtain discharge order

  B. Determine the expected time of discharge

  C. If valuables or medications have been stored, obtain them, have patient sign for them, and return receipt to proper place

  D. Prepare and review home instruction with patient

  E. Check dressings or bandages to see if they are to be changed before release

  F. Check to see if the business office procedure has been completed

  G. Assist patient in dressing and pack his or her belongings

  H. Obtain a wheelchair and take the patient to the discharge area

  I. Assist the patient into the car; give patient his or her belongings

  J. Return wheelchair to storage area

  K. Arrange for terminal cleaning of the unit

  L. Report and record

    1. Report the time the patient left to the person in charge

JOB SHEET #9

2. Record the discharge including the time and mode of discharge, a statement about the patient's general condition, destination (home or another facility), and home instruction given; sign your name and title

M. Remove chart from chart holder and place in designated area

JOB SHEET #9

III. Checklist for discharging a patient

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments:		
B. Obtained discharge order	☐	☐
Comments:		
C. Determined the expected time of discharge	☐	☐
Comments:		
D. If valuables or medications had been stored, obtained them, had patient sign for them, and returned receipt to proper place	☐	☐
Comments:		
E. Prepared and reviewed home instruction with patient	☐	☐
Comments:		

JOB SHEET #9

	Performed well	Needs improvement
F. Checked dressings or bandages to see if they were to be changed before release	☐	☐
Comments: ________________		
G. Checked to see if the business office procedure had been completed	☐	☐
Comments: ________________		
H. Assisted patient in dressing and packing his or her belongings	☐	☐
Comments: ________________		
I. Obtained a wheelchair and took patient to discharge area	☐	☐
Comments: ________________		
J. Assisted the patient into the car; gave patient his or her belongings	☐	☐
Comments: ________________		

JOB SHEET #9

		Performed well	Needs improvement
K.	Returned wheelchair to storage area	☐	☐
	Comments: ______________________________		
L.	Arranged for terminal cleaning of unit	☐	☐
	Comments: ______________________________		
M.	Reported the time the patient left to the person in charge; recorded the discharge including the time and mode of discharge, a statement about the patient's general condition, destination, and home instructions; signed name and title	☐	☐
	Comments: ______________________________		
N.	Removed chart from chart holder and placed in designated area	☐	☐
	Comments: ______________________________		

PN I - 337-C

THE PATIENT'S ENVIRONMENT
UNIT IV

TEST

NAME ______________________________ SCORE ______________

1. Match terms associated with the patient's admission, transfer, discharge, and environment to the correct definitions. Write the correct numbers in the blanks.

_____a. Information about a patient that communicates the actions that will be taken to meet the needs of the patient

_____b. Recognition of disease state from symptoms, examinations, and results of tests performed

_____c. Visible card file in which nursing care plans are kept

_____d. Prediction of the course of a disease

_____e. Sheet used to protect bed or turn the patient

_____f. Process of recognizing and noting some fact or occurence

_____g. Receptacle for urine

_____h. Any change in the body or its functions that is obvious to the senses of the observer

_____i. Shallow vessel used for defecation or urination by patients confined to bed

_____j. Any change in the body or its functions that is known by the patient that is not visible to others

_____k. Frame to keep the patient's bedclothes from touching all or part of the patient's body

_____l. Acceptable procedure or set standard made by a governing authority

_____m. Kidney-shaped metal or plastic utensil

_____n. Specialized division that may be a part of an institution

1. Subjective symptom
2. Diagnosis
3. Patient care plan
4. Policy
5. Prognosis
6. Kardex
7. Bedpan
8. Observation
9. Drawsheet
10. Bed cradle
11. Objective symptom
12. Urinal
13. Emesis basin
14. Department

_____o. Capable of causing injury or danger

_____p. Something having medicinal or healing qualities

_____q. Area that includes bed, bedside table, and other furnishings and equipment set aside for use by one patient

_____r. Surroundings, conditions, or influences that affect an organism

_____s. Side attachments for hospital beds to protect and/or assist patients

_____t. Amount of moisture in the atmosphere

_____u. Seclusion or freedom from unauthorized observation

15. Environment
16. Side rails
17. Humidity
18. Patient unit
19. Privacy
20. Hazardous
21. Therapeutic

2. List common feelings the patient may have about hospitalization.

a. ____

____

b. ____

____

c. ____

____

d. ____

____

e. ____

____

f. ____

____

g. ____

____

3. Select from the following list common legal forms that the patient may need to fill out or sign during the admission process. Write an "X" in the correct blanks.

_____a. Insurance verification forms

_____b. Will

_____c. Authorization for medical and/or surgical treatment

_____d. Consent for surgery

_____e. Consent for autopsy

_____f. Release forms

_____g. Consent for special procedures

4. Describe the nurse's role in admitting the patient.

a. Make a good first impression on the patient-- ____________________________

____

____

____

____

____

____

b. Be courteous with the patient's family and help them feel comfortable--________

____

____

____

____

____

____

5. Select from the following list ways to help the patient during admission. Write an "X" in the correct blanks.

_____a. Hurry the process so that the patient won't get tired

_____b. Call the patient by correct name

_____c. Check with admissions office for the correct room number for the patient being admitted

_____ d. Provide a sedative

_____ e. Explain the hospital routine by telling the patient the times meals are served, visiting hours, and about special services

_____ f. Open the bed to receive the patient and check to make sure all the equipment is in place and working properly

_____ g. Provide for privacy

_____ h. Be careful with the patient's personal items

_____ i. Provide drinking water to settle patient's nerves

_____ j. Orient the patient and family to the room and to the equipment he or she will be using

_____ k. Give medications immediately that were routinely taken at home

_____ l. Make sure all identification forms have the correct information and are consistent

_____ m. Introduce patient to the person that will be sharing the room if it is a semi-private room

_____ n. Give bath with antiseptic solution

_____ o. Answer all questions carefully, or refer patient to the appropriate person

6. List general observations to make during the admission process.

   a. ____________________

   b. ____________________

   c. ____________________

   d. ____________________

   e. ____________________

7. Describe common records that are made and kept during the patient's hospitalization.

   a. Requisitions-- ____________________

b. Patient care plan-- ____________________

C. Chart-- ____________________

8. Select from the following list basic equipment needed in a patient unit. Write an "X" in the correct blanks.

_____a. Linens for bed
_____b. Fresh flowers
_____c. Call system
_____d. Bedside table
_____e. Oxygen
_____f. One additional chair
_____g. Hospital bed
_____h. Overbed table
_____i. Suction machine

9. Describe ways in which the environment can be controlled for the patient's comfort and health.

   a. Temperature-- ______________________________

   b. Noise-- ______________________________

   c. Humidity-- ______________________________

   d. Odors-- ______________________________

   e. Light-- ______________________________

   f. Cleanliness-- ______________________________

10. Select from the following list safety measures that are nursing responsibilities. Write an "X" in the correct blanks.

    ______a. Remove hazardous objects, such as safety pins or sharp objects

    ______b. Monitor the patient who is smoking

______ c. Repair equipment immediately

______ d. Tape frayed electrical cords

______ e. Do not leave equipment in front of doorways, elevators, or stairwells

______ f. Keep patient's articles within reach

______ g. Assist patient in positioning personal heating pad

______ h. Make sure that you read and understand your hospital's plan of action to follow in case of fire, bomb threats, or natural disasters

______ i. Check to make sure that communication device and other needed articles are within the reach of the patient

______ j. Provide adequate lighting for patient and personnel

______ k. Keep bed level up for comatose patients

______ l. Wash hands before and after caring for a patient before you work with others

______ m. Use proper temperatures for enema solutions, bath water, wet dressings, feeding formulas, and other liquids

______ n. Use appliances as directed; label any faulty equipment and remove from the room

______ o. Keep floor clean of hazardous materials, such as spilled liquids, papers, and broken glass

11. Match terms associated with rest and sleep to the correct definitions. Write the correct numbers in the blanks. Definitions are continued on the next page.

______ a. One of a group of organic compounds derived from barbituric acid and commonly called "sleeping pills"

______ b. Periodic, temporary cessation or interruption of the waking state

______ c. Disturbed perception in regard to time, place, or person

______ d. Freedom from activity

______ e. Faulty or inadequate awareness

______ f. Chemical compound used as a central nervous system stimulant

______ g. Loss of recognition of time, place, or person

______ h. Inability to fall asleep or remain asleep throughout the night

1. Amphetamine
2. Misconception
3. Sleep
4. Disorientation
5. Insomnia
6. Confusion
7. Rest
8. Barbiturate
9. Hypnotic
10. Sedative

_____ i. Chemical compound used to reduce excitement

_____ j. Chemical compound used to induce sleep

12. State reasons rest and sleep are needed.

a. ______________________________

b. ______________________________

c. ______________________________

13. Describe factors that may interfere with sleep.

a. Pain and discomfort-- ______________________________

b. Stress and tension-- ______________________________

c. Unfamiliar surroundings-- ______________________________

14. List common effects of lack of sleep.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

15. State measures that the nurse may use to promote rest and/or induce sleep.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

g. ______________________________

h. ______________________________

i. ______________________________

j. ______________________________

k. ______________________________

l. ______________________________

m. ______________________________

n. ______________________________

16. List observations to make concerning the patient's rest and sleep.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

17. Match terms associated with special equipment used in making beds to the correct definitions. Write the correct numbers in the blanks. Terms and definitions are continued on the next page.

______a. Device attached to the bed to exert pull on a specific part of the body

______b. Plantar flexion or turning down of the foot at the ankle due to weakness, injury, disease, or inactivity

______c. Board which is detachable for use under a patient when emergency cardiopulmonary resuscitation is needed

1. Footdrop
2. Traction equipment
3. Emergency headboard

______d. Board placed at the patient's feet to prevent footdrop and to keep bed linens off of feet

______e. Sand-filled bags of various sizes used to keep a patient in a specified position

______f. Board placed under the mattress to provide firmer support

4. Sandbags
5. Footboard
6. Bedboard

18. State reasons a patient's bed should be made correctly.

a. ____

b. ____

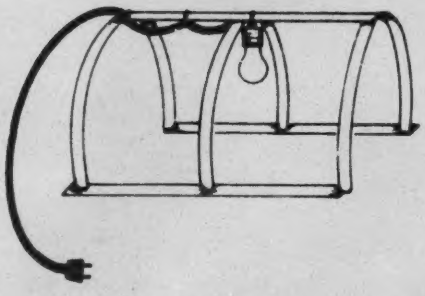
c. ____

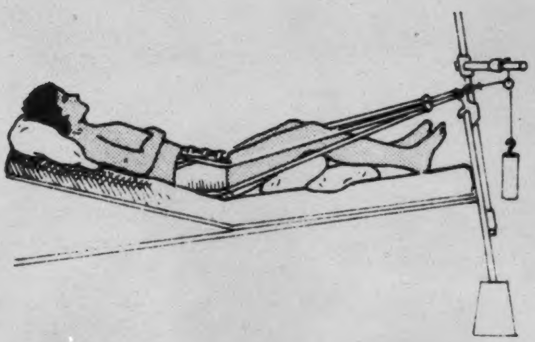
d. ____

e. ____

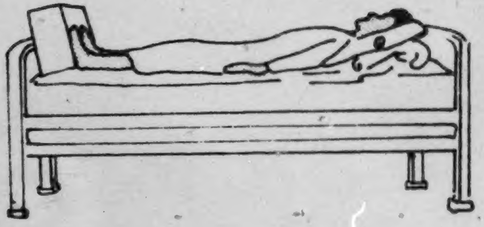
f. ____

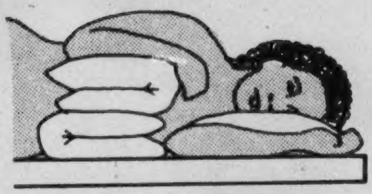
19. Label additional equipment that may vary the usual bed-making procedure.





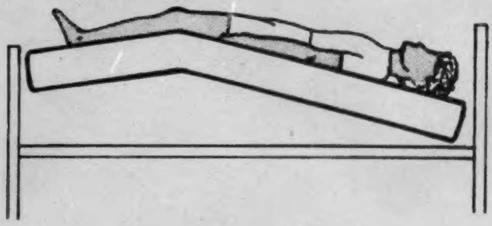
a. ____________________ b. ____________________

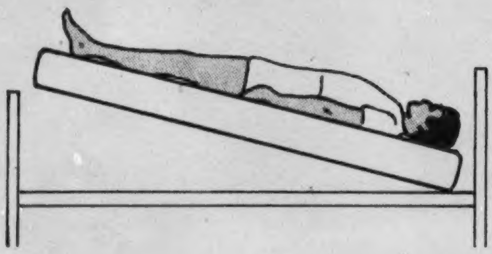




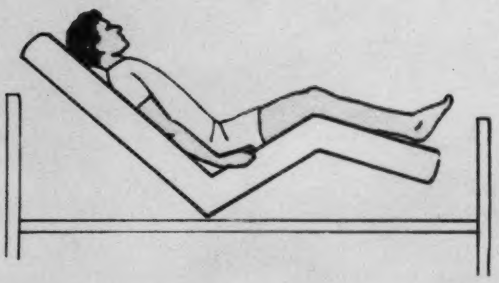
c. ______________________________ d. ______________________________

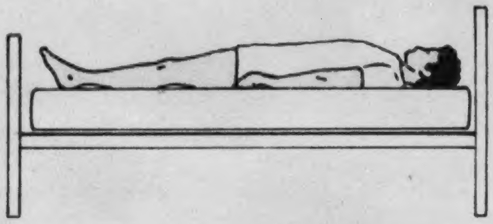
20. Identify bed positions. Write the correct names in the blanks provided.





a. ______________________________ b. ______________________________





c. ______________________________ d. ______________________________

Flat with bed level, with or without a pillow under head

Modified Trendelenberg

Trendelenberg

Fowler's position

21. Match terms associated with body mechanics to the correct definitions. Write the correct numbers in the blanks.

______a. State of increased discomfort and decreased efficiency resulting from prolonged exertion

______b. Imaginary vertical line which passes through the center of gravity of an object or body

______c. Coordination of body alignment, balance, and movement

______d. Relationship of the body segments to each other

______e. Contact of an object or body with the ground or other surface

______f. Ability to move quickly and easily

______g. Point or area in an object or body at which its weight or mass is centered

______h. State of slight contraction present in a normal muscle

______i. Study of body movement

______j. Bodily injury from excessive tension, effort, or use

______k. Lacking muscle tone

______l. Alignment and position of the body

1. Fatigue
2. Body mechanics
3. Line of gravity
4. Base of support
5. Alignment
6. Center of gravity
7. Flaccid
8. Posture
9. Agility
10. Strain
11. Muscle tone
12. Kinesiology

22. Select from the following list reasons for using proper body mechanics. Write an "X" in the correct blanks.

______a. Improves health and appearance

______b. Enlarges muscles

______c. Improves digestion

______d. Prevents muscle strain

______e. Sets an example

______f. Preserves muscle tone and strength

______g. Aids in weight reduction

______h. Promotes good posture

_____i. Saves energy

_____j. Increases agility and efficiency

_____k. Promotes use of back muscles

23. Describe principles of gravity which affect balance.

a. Center of gravity-- ____________________

b. Base of support-- ____________________

c. Line of gravity-- ____________________

24. State principles of body mechanics.

a. ____________________

b. ____________________

c. ____________________

d. ____________________

e. ____________________

f. ____________________

g. ____________________

h. ____________________

i. ____________________

25. Demonstrate the ability to:

    a. Prepare a patient unit.

    b. Admit a patient.

    c. Take height and weight (adult and infant).

    d. Apply principles of body mechanics.

    e. Make an unoccupied bed and an open bed.

    f. Make an occupied bed.

    g. Make a postoperative bed.

    h. Transfer a patient.

    i. Discharge a patient.

    (NOTE: If activity 25 has not been finished before the test, ask your instructor when it should be completed.)

THE PATIENT'S ENVIRONMENT
UNIT IV

ANSWERS TO TEST

1. a. 3
   b. 2
   c. 6
   d. 5
   e. 9
   f. 8
   g. 12
   h. 11
   i. 7
   j. 1
   k. 10
   l. 4
   m. 13
   n. 14
   o. 20
   p. 21
   q. 18
   r. 15
   s. 16
   t. 17
   u. 19

2. a. Anxiety and apprehensiveness
   b. Stress caused from different factors
   c. Fear of loss of identity and privacy
   d. Fear of pain, treatment, or surgery
   e. Concern about the expenses of hospitalization
   f. Loss of independence
   g. Worry that the patient may be unable to care for himself or herself upon leaving the hospital

3. a, c, d, f, g

4. Description should include:
   a. Make a good first impression on the patient
      1) The first person who greets the patient creates the atmosphere that will help determine the patient's attitude
      2) Smile and show empathy for the patient's feelings
      3) Call the patient by his or her name (Miss, Ms., Mr., or Mrs.) and give your name and title

b. Be courteous with the patient's family and help them feel comfortable

1) Explain hospital policies to the family in clear terms

2) Ask the family members if they have questions concerning the patient's hospitalization

3) Direct the family members to waiting rooms, snack areas, cafeterias, or restrooms if they are not familiar with the hospital

4) Remember you are not treating just the patient, but the whole family

5. b, c, e, f, g, h, j, l, m, o

6. a. General appearance and behavior (objective)

b. Assistance required

c. Symptoms expressed by the patient (subjective)

d. Height and weight

e. Vital signs

7. Description should include:

a. Requisitions

1) Slips are made out for routine procedures and specific tests that the physicians order

2) Other requisitions may be made out for dietary, supplies, and/or equipment for each patient

b. Patient care plan

1) Specific care plan is made out for each patient to meet his or her needs more effectively

2) Plan be found in the Kardex

3) Plan contains information needed to communicate to each staff member the type of care that a particular patient needs

c. Chart

1) Admission slip contains patient's name, address, doctor's name, admitting diagnosis, insurance numbers, next of kin, and other personal data

2) Consent forms that have been signed and witnessed are included

3) Graphic sheets for vital signs are included

4) Nurses' notes contain specific information concerning patient's care

   5) Medication sheets indicate which medicines were given, how they were given, and when they were given

   6) Forms to which requisitions may be attached are included

   7) Forms for doctors to write orders are included

   8) Progress notes are written each day by physician and other members of health care team

   9) Any other reports about the patient's hospitalization are included

8. a, c, d, f, g, h

9. Description should include:

   a. Temperature

      1) Thermostats or regulators should be kept at a constant, comfortable temperature

      2) Patients with particular problems may need to have a cooler or warmer temperature

   b. Noise

      1) Voices should be kept low to provide a restful atmosphere

      2) Radios, televisions, and other equipment should be monitored so as not to disturb roommates or other patients

   c. Humidity

      1) Breathing is easier when there is some moisture in the air

      2) Some humidifiers are built into the air control units or vaporizers can add needed moisture

   d. Odors

      1) Minimize odors by removing all soiled articles as soon as possible from the room

      2) If odor is constant, as in a continual discharge or wound drainage, a deodorizer can be obtained to help disguise the odor

   e. Light

      1) Use a minimum of lights in room so that glare will not disturb patient

      2) Use direct lighting in procedures that need good exposure

   f. Cleanliness

      1) Remove any soiled articles from room as soon as possible

2) Keep overbed and bedside tables free from clutter

3) Remove any extra dishes, glasses, ashtrays, or papers from overbed table before serving patient's meals

10. a, b, e, f, h, i, j, l, m, n, o

11. a. 8
    b. 3
    c. 6
    d. 7
    e. 2
    f. 1
    g. 4
    h. 5
    i. 10
    j. 9

12. a. Body cells need periods of decreased activity in order to restore themselves
    b. Stress causes the body to overwork; rest is needed to aid in recovery
    c. Mental processes are slowed and mental fatigue occurs from lack of rest and sleep

13. Description should include:
    a. Pain and discomfort
        1) Pain thresholds vary with individuals; some can tolerate more pain than others
        2) Pain and/or discomfort can be caused from external or internal functions
    b. Stress and tension
        1) Anxiety concerning illness, family, or loss of income
        2) Fear of the unknown
    c. Unfamiliar surroundings
        1) Noises
        2) Equipment
        3) People

14. a. Fatigue
    b. Difficulty in concentration
    c. Irritability
    d. Episodes of confusion and misconception
    e. Disorientation

15. a. Encourage patient to exercise during the day if able, gradually reducing activity in the evening
    b. Give back rub
    c. Provide neat, restful environment
    d. Change patient's position
    e. Provide mid-evening snack or warm milk near bedtime, if allowed
    f. Allow time for patient to verbalize feelings
    g. Provide warm bath
    h. Individualize bedtime routines
    i. Decrease noise in surroundings
    j. Adjust lighting to meet patient's needs
    k. Observe patient throughout night without disturbing him or her with noises or lights
    l. Wake patient for medication and treatment only when necessary
    m. Provide extra warmth by adding extra covering as needed
    n. Use drugs to promote sleep when necessary

16. a. Sleep and rest patterns
    b. Aids to sleep
    c. Environment preferences
    d. Problems, anxieties, or complaints of the patient

17. a. 2
    b. 1
    c. 3
    d. 5
    e. 4
    f. 6

18. a. Provides for the comfort of the patient

b. Protects patient and nurse from injury

c. Saves time needed for patient care

d. Makes performance of other procedures easier

e. Protects beds from bodily discharges

f. Makes patient's unit more attractive

19. a. Bed cradle

b. Traction equipment

c. Footboard

d. Sandbags

20. a. Modified Trendelenberg

b. Trendelenberg

c. Fowler's position

d. Flat with bed level, with or without a pillow under head

21. a. 1

b. 3

c. 2

d. 5

e. 4

f. 9

g. 6

h. 11

i. 12

j. 10

k. 7

l. 8

22. a, d, e, f, h, i, j

23. Description should include:

a. Center of gravity--Balance is more stable when the center of gravity is low

b. Base of support--Balance is more stable when the base of support is broad

c. Line of gravity--Balance is more stable when the line of gravity passes through the base and near the center of the base

24. a. Body balance is related to base of support

b. Maintaining proper alignment of the body parts reduces strain and fatigue and makes balance easier

c. Changes in position and type of activity help maintain muscle tone and lessen fatigue

d. Working or carrying weight close to the body requires less effort

e. Proper body alignment while sitting reduces muscle strain and provides better circulation in legs and feet

f. Pulling, sliding, or rolling an object usually requires less effort than lifting it

g. Smooth surfaces create the least friction; therefore, it is easier to move a heavy object on a smooth surface

h. Whenever possible, use mechanical devices to lift and turn heavy or helpless patients

i. Adjust height of bed to working level

25. Performance skills evaluated to the satisfaction of the instructor

INITIAL PATIENT ASSESSMENT AND DOCUMENTATION
UNIT V

UNIT OBJECTIVE

After completion of this unit, the student should be able to assist in the nursing process by obtaining patient data to be used in the first step of patient assessment. The student should also be able to conduct a patient interview, take patient history, describe in correct terms the findings, and assist in a complete physical assessment. This knowledge will be evidenced by completion of assignment sheets, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with initial patient assessment to the correct definitions.
2. Select from a list advantages of the patient care plan.
3. Describe steps of the nursing process.
4. Distinguish between subjective and objective data.
5. List methods of collecting data for patient assessment.
6. Describe skills involved in observation.
7. Select from a list purposes of observing and keeping documented records.
8. Match Maslow's common basic needs to the correct definitions.
9. Arrange in order Maslow's common basic needs.
10. Select from a list areas of information that may be found in a patient interview.
11. State factors to remember when filling out a patient history.
12. Identify equipment needed to complete a physical assessment.
13. Identify body positions used in various medical procedures.
14. State the nurse's functions when assisting with a physical assessment.
15. Describe each area of the physical assessment.
16. Match common contents of the patient's chart to the correct descriptions.

17. State general rules for charting.
18. State information to remember when documenting patient's condition.
19. Write the meanings of common abbreviations, numbers, and symbols used in charting.
20. Recognize and record subjective and objective symptoms.
21. Take patient histories.
22. Demonstrate the ability to:
    - a. Prepare ophthalmoscope and otoscope for use.
    - b. Position and drape patients for common medical/diagnostic procedures.
    - c. Assist with complete physical assessment.

INITIAL PATIENT ASSESSMENT AND DOCUMENTATION
UNIT V

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

A. Provide students with objective sheet.

B. Provide students with information sheet.

C. Discuss unit and specific objectives.

D. Discuss information sheet.

E. Obtain patient history or assessment sheets used in your hospital to use in classroom.

F. Conduct a patient interview using one of the students or another staff member as the patient.

(NOTE: The more the student is shown the correct methods of obtaining information from patients, the more comfortable he or she will feel about the procedure. If possible videotape the interview for later use as an example.)

G. Show and demonstrate all equipment that will be used in the hospital in which students will be doing their clinical experience.

H. Have students practice filling out chart forms used in your locality.

I. Invite the in-service director to speak to the class and discuss what type of charting will be expected of the students and the hospital.

(NOTE: Some hospitals use very descriptive charting, while others use only pertinent charting.)

J. Take a field trip to medical records to allow the students to see charts being microfilmed and how good, neat charting helps the process.

K. Emphasize the importance of the chart as a legal document.

L. Play bingo with the symbols, terms, and abbreviations.

(NOTE: Make bingo cards with the symbols, numbers, and abbreviations in the squares. Call out the meanings or the number and let the students use lemon drops, Red Hots, or other edibles to place over the squares. Play bingo in the usual way.)

Example:

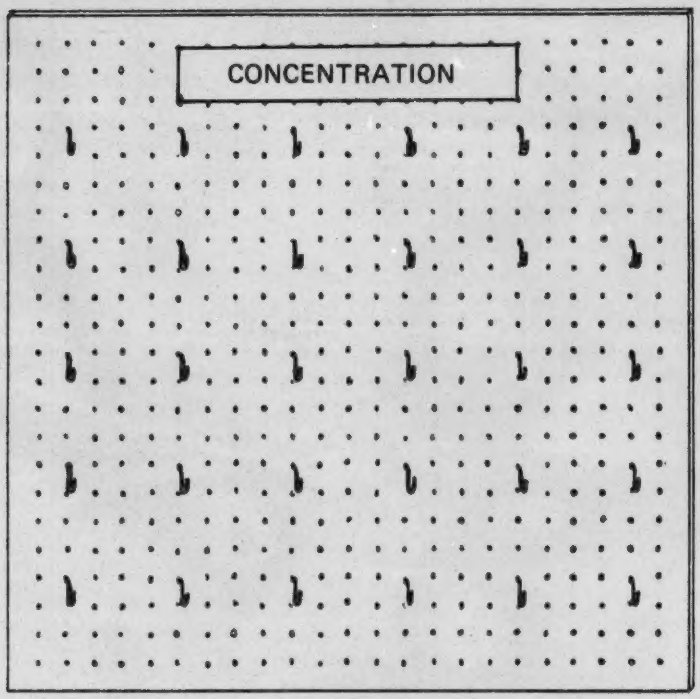
BINGO GRID

CVA	DC	mm	post-op	psych
Sol	RLQ	via	qod	qid
o.d.	BM	FREE	gr	GU
per	pre-op	pt	O.T.	a.m.
gyn	h	s.s.	wt	amb

M. Play Concentration with terms or abbreviations

(NOTE: Play Concentration as it is on television. Divide class into two teams. Have the first team participant select two numbers. If the numbers match as they are turned over, ask the participant to give you the term and its definition. If it does not match, turn the cards over and allow the other team to select two numbers. Keep score and give the winning team a nice surprise.)

Example:



MAKING THE CONCENTRATION BOARD:

Materials required to make the basic CONCENTRATION board (which can be adapted to meet a variety of group and individual learning situations) are: pegboard (24" x 30"), pegboard hooks (approximately 30-36), and posterboard or index cards

N. Give test

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Assignment sheets

1. Assignment Sheet #1--Recognize and Record Subjective and Objective Symptoms
2. Assignment Sheet #2--Take Patient Histories

D. Job sheets

1. Job Sheet #1--Prepare Ophthalmoscope and Otoscope for Use
2. Job Sheet #2--Position and Drape Patients for Common Medical/Diagnostic Procedures
3. Job Sheet #3--Assist with Complete Physical Assessment

E. Test

F. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study.* Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

B. Sloan, Jamee. *Medical Assistant.* Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1981.

C. Atkinson, Leslie, and Murray, Mary. *Understanding the Nursing Process.* New York: Macmillan Publishing Company, 1980.

D. Brunner, Lillian, and Suddarth, Doris. *Textbook of Medical-Surgical Nursing.* Philadelphia: J.B. Lippincott Company, 1980.

E. *Assessing Vital Functions Accurately. Nursing Skillbook Series.* Horsham, Pennsylvania: Intermed Communications, Inc., 1978.

IV. Filmstrips:

(NOTE: The following filmstrips are available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.)

A. *Assessment in the Nursing Process.*

B. *Assisting with a Physical Examination.*

C. *Nursing Process: An Overview.*

D. *Observation and Charting.*

E. *Physical Assessment.*

(NOTE: This series features the abdomen and genitalia, chest, head and neck, nervous system, the skin, and the extremities.)

F. *Planning the Nursing Process.*

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INITIAL PATIENT ASSESSMENT AND DOCUMENTATION
UNIT V

INFORMATION SHEET

I. Terms associated with initial patient assessment

A. Nursing process--Course of action that includes patient assessment, planning, implementation, and evaluation of care

B. Assessment--First step in the nursing process that consists of three problem solving activities: data collection, data organization, and formulation of a nursing diagnosis

C. Nursing diagnosis--Statement of a present or potential patient problem that requires nursing intervention

Example: Difficulty in walking due to weakness from surgery

D. Medical diagnosis--Statement of a present or potential patient condition based on diagnostic procedures

Example: Cancer of the breast

E. Plan--Method devised for making or doing something or attaining an end

F. Implementation--Carrying out a plan of action

(NOTE: Implementation, or the action taken if a patient problem is found, becomes a part of the patient care plan.)

G. Patient care plan--Contains those things or actions the nurse and other staff plan to do in order to help patients achieve goals

(NOTE: A patient care plan is usually found in the Kardex at the nurses' station in a traditional hospital staffing plan. The plan should be a major communication instrument where pertinent information concerning a patient's care is kept. Care plan information should be evaluated and changed as the patient's progress is noted. This plan is also called a nursing care plan.)

H. Priority--Something meriting special attention in advance of other things

(NOTE: Learn to set priorities when assessing, planning, and implementing patient care.)

I. Interview--Meeting at which information is obtained

J. Maslow's hierarchy of human needs--Philosophy of psychologist Abraham Maslow that each person has a basic set of needs that is arranged according to priority

(NOTE: Maslow theorized that the lower physical needs must be met before higher needs can be met.)

INFORMATION SHEET

K. Inspection--First fundamental step of the physical assessment when observer looks over the patient generally, then more specifically, in different areas

(NOTE: Much information can be gained from the patient just by introducing yourself, shaking hands with the patient, and exchanging the first words of communication.)

Examples: Posture and stature, body movements, nutrition, speech pattern, and body temperature

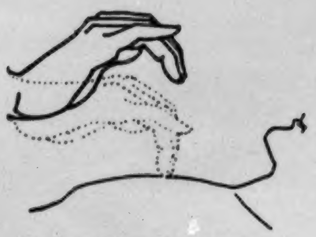
L. Palpation--Act of feeling with the hand by applying light pressure to various parts of the body that can be assessed

Examples: Blood vessels; lymph nodes; thyroid; organs of abdomen, pelvis, and rectum; sounds such as murmurs in the heart

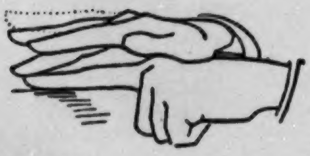
M. Percussion--Act of striking a part with short, sharp blows as an aid in diagnosing the condition of the parts beneath the sound obtained

(NOTE: Percussion produces a vibration that reflects the structure of the underlying thoracic or abdominal contents. This is done several different ways.)

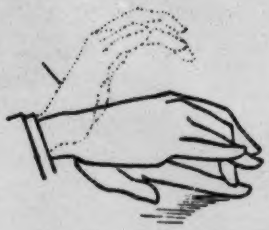
Examples:



Immediate percussion



Weak percussion



Strong percussion

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INFORMATION SHEET

N. Auscultation--Sound produced within the body which can be heard by a trained ear by the use of a stethoscope

(NOTE: When assessing these sounds, three characteristics should be noted: intensity, frequency, and quality.)

Examples: Intensity-loudness, frequency-pitch, quality-tones

O. Symptoms--Evidence of disease or of a patient's condition, shown by a change in body or mental state

P. Observation--Act of recognizing and noting facts or occurrences

Q. Examination--To inspect closely

R. Sphygmomanometer--Inflatable cuff attached to a measurement device that is used to assess blood pressure

(NOTE: There are various types of sphygmomanometers available. Some of these are types with mercury columns or aneroid dials, self blood pressure devices with which patients can monitor themselves at home, and electronic machines which register pressure on digital readouts.)

S. Patient profile--Introductory, identifying information that helps the nurse when interviewing

(NOTE: Many times the admission sheet, filled out in the admitting office, will give the nurse some clues as to what questions need to be asked in the patient interview.)

Examples: Patient's name, sex, age, marital status, race, occupation, next of kin; may have his or her admitting diagnosis or chief complaint

T. Chief complaint--Issue or problem that has brought the patient to seek help

U. Neuro check--Evaluation of the neurological system

(NOTE: This exam checks pupil reaction, speech, senses, gait or motor power, and coordination.)

V. Snellen chart--Chart imprinted with black letters that is used for testing visual acuity

II. Advantages of the patient care plan

A. Provides continuation and consistency in patient care

(NOTE: By using the nursing process and developing a patient care plan, all health team members will have the same information and care will not be interrupted by the patient having to repeat his or her problems to each nurse.)

INFORMATION SHEET

B. Improves the quality of care

(NOTE: Patient care plans and reassessment of care given will help meet the changing needs of the patient and improve his or her care.)

C. Promotes participation of patient

D. Aids in making staff assignments

(NOTE: By looking at the care plan and determining the complexity of the patient and the care to be provided, nursing staff can make sure that patients who need more care are assigned to a nurse who can spend quality time with them.)

E. Provides professional growth

(NOTE: Nurses may share their expertise and knowledge by communicating techniques and ideas for upgrading patient care.)

F. Provides job satisfaction

(NOTE: Care plans that are kept up-to-date save time, energy, and frustration of the staff. Satisfaction will be felt when needs are met effectively.)

III. Steps of the nursing process

A. Assessing

1. Conduct the nursing history
2. Perform or assist with the physical examination
3. Interview the patient's family and/or others
4. Study the patient's health profile
5. Formulate the nursing diagnosis

B. Planning

1. Assign priority to the nursing diagnosis
2. Specify the goals

(NOTE: Specify the short-term and long-term goals.)

Examples: Short-term goal--Patient will gradually increase activity postoperatively

Long-term goal--Patient will be able to ambulate in the home environment

INFORMATION SHEET

3. Identify the nursing actions to attain goals

4. Develop the written patient care plan using clear, correct terminology

   (NOTE: This care plan should include nursing diagnoses, goals, nursing actions, and outcome criteria. The plan should allow for flexibility to meet the patient's changing problems.)

5. Involve the patient and family in all aspects of the care-planning

C. Implementing

   1. Put the patient care plan into action

   2. Coordinate the plan with all team members, including patient and family

   3. Record the patient's responses to the actions

D. Evaluating

   1. Collect objective data

   2. Compare the patient's responses to the short-term and long-term goals; determine if the goals were achieved

      (NOTE: Involve the patient, family, and significant team members in the evaluation process.)

   3. Identify the changes or adjustments that need to be made in the care plan

      (NOTE: Assessment and reassessment should be a continual activity, allowing for changes and progress.)

IV. Subjective and objective data (Assignment Sheet #1)

A. Subjective

   1. Information given by patients

      Example: "I have a terrible headache"

   2. Nurses interpret information differently

      Example: Patient: I have a terrible headache

      Nurse I: Patient is frightened and tense from stress, which caused a headache

      Nurse II: Patient may have a brain tumor

INFORMATION SHEET

B. Objective data

(NOTE: This is the type of information to use in nursing observations.)

1. Information obtained by direct observation that can be clearly seen by other observers

   Example: Rash on upper arm, bruise on lower leg

2. Facts or behaviors are stated as the nurse observes them, without any conclusions being drawn

   Example: Sitting in chair beside bed wringing hands and rocking back and forth. The nurse should not make premature conclusions until more data is collected

V. Methods of collecting data for patient assessment

A. Observation

B. Interview

C. Examination

VI. Skills involved in observation

A. Looking

1. Note facial expression for alertness, pain or discomfort, satisfaction, worry, or other reactions

2. Check skin for color, rashes, temperature, evidence of pressure, breaks, or other abnormal conditions

3. Note patient's surroundings for orderliness, attractiveness, comfort, convenience, and safety

4. Observe other factors concerning the patient's condition, such as amount, character, and color of body discharges or drainage from wounds

B. Listening

1. Hear not only the words of the patient but tone of voice and hidden meanings

2. Note quality of respirations, restlessness, wakefulness, or signs of disorientation

3. Be aware of characteristic sounds of special equipment, such as respirators or heart monitors

INFORMATION SHEET

4. Develop special listening skill using a stethoscope

   Examples: Bowel sounds, breath sounds

C. Smelling

   1. Note any unusual odors in the environment

   2. Observe changes in the characteristic odor of human excreta and drainage from wounds

D. Talking

   1. Nurse's manner of speaking conveys attitude and response

   2. Skillful questioning is essential in gaining information from patients

   3. Communication with members of the health team and/or the family aids in patient care and planning

E. Touching or feeling

   1. Sense of touch detects abnormalities of skin or temperature

   2. Taking the pulse is one of the most valuable observations by touch

   3. Nurse's touch communicates security and ability to the patient

VII. Purposes of observing and keeping documented records

   A. Provide a continuous, detailed account of the patient's behavior, illness, treatment, medications, and nursing care

   B. Serve as a guide in planning and implementing the nursing process

   C. Record progress being made by the patient and assist the physician in diagnosis and in planning further medical care

   D. Aid other health workers in the care and treatment of the patient and his or her family

   E. Provide statistical information for local, state, and national health service planning

   F. Provide information if needed in legal proceedings

   G. Serve as source of information for research and for medical or nursing students

INFORMATION SHEET

VIII. Maslow's common basic needs

- A. Physiological--Those that must be met for survival
- B. Safety and security--Things which make a person feel safe
- C. Love and belonging--Need to give and receive love and affection
- D. Esteem--Things that make a person feel good about herself or himself; pride in one's ability and accomplishments
- E. Self-actualization--Need to continue to grow and change; working toward future goals

IX. Order of Maslow's common basic needs

(NOTE: All human beings have common needs which must be met. This is a good method to use when assessing your patient's needs and setting priorities.)

- A. Physiological

  Examples: Food, water, rest, sex

- B. Safety and security

  Examples: Sleeps with night light on

- C. Love and belonging

  Examples: Being part of a family

- D. Esteem

  Example: Child is proud that he can read

- E. Self-actualization

  Example: "I am going to be a nurse like my dad"

X. Areas of information that may be found in a patient interview (Assignment Sheet #2)

- A. Patient profile
- B. Chief complaint
- C. History of present illness

  (NOTE: It is important to note specific dates of symptoms or occurrences of the illness.)

INFORMATION SHEET

D. Past medical history

(NOTE: Complete exploration of past medical history will include medications, immunizations, and allergies.)

XI. Factors to remember when filling out a patient history

A. Put the patient at ease; make him or her as comfortable as possible

(NOTE: The patient will be more willing to communicate if he or she feels at ease with the nurse. The patient who has difficulty breathing lying flat in bed will not be able to give a very good history because of his or her discomfort. Offer to assist the patient to the most comfortable position possible.)

B. Allow the patient to express self fully

C. Make sure the patient understands your questions and convey that you are not prying or judging patient's personal life

D. Communicate at a level that the patient understands

E. Be aware of any nonverbal gestures that may indicate feelings about certain subjects

F. Obtain the information on another sheet of paper if you have difficulty keeping up with the speed of the history, then transfer to the permanent form

G. Write clearly and neatly on the permanent history form, as this will be a basis for the nursing process

H. Ask questions if you do not understand or if you need more information on a certain topic

(NOTE: Ask open-ended questions to allow the patient to freely express himself or herself, rather than give "yes" and "no" answers.)

INFORMATION SHEET

XII. Equipment needed to complete a physical assessment (Job Sheet #1)

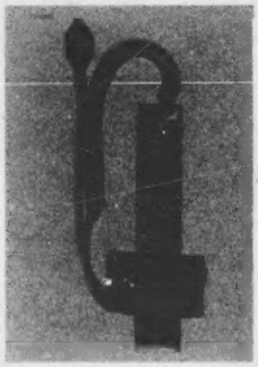
A. Stethoscope

(NOTE: There are various types of stethoscopes available.)

B. Sphygmomanometer

(NOTE: There are other types of sphygmomanometers available.)

Aneroid



Mercury

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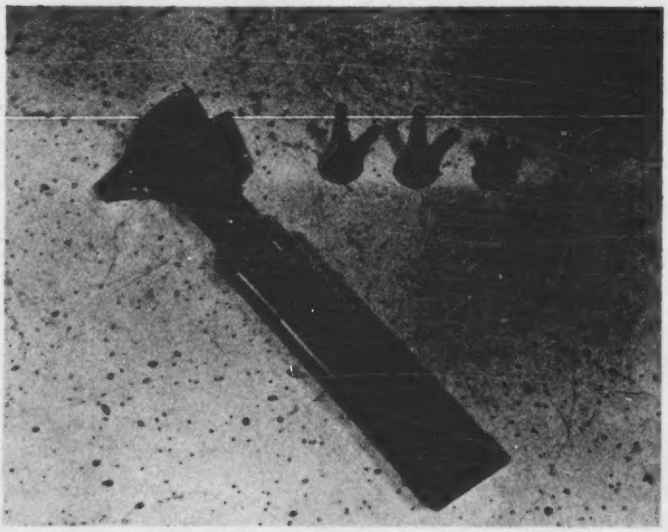
INFORMATION SHEET

C. Ophthalmoscope

D. Otoscope with various sizes of specula

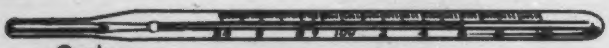
(NOTE: Many times this piece of equipment is used as a light source for other examinations.)



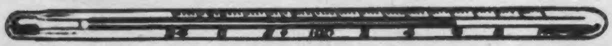
INFORMATION SHEET

E. Thermometers

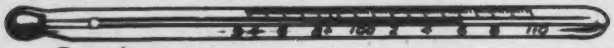
(NOTE: Various thermometers are used for different areas of the body. Make sure you are using the correct type.)



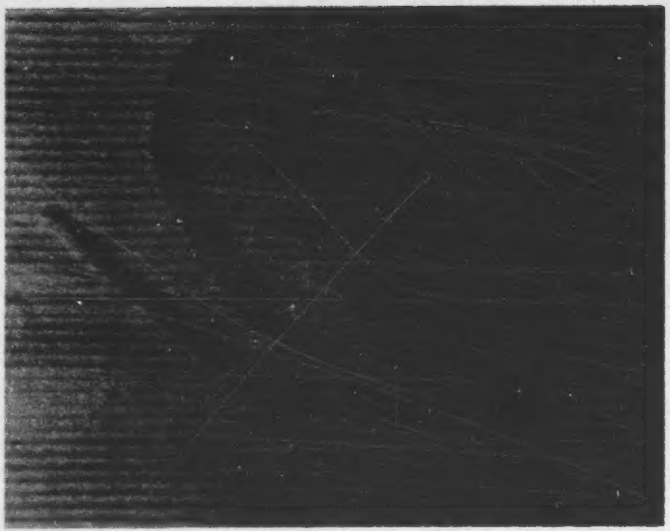
Oral



Security



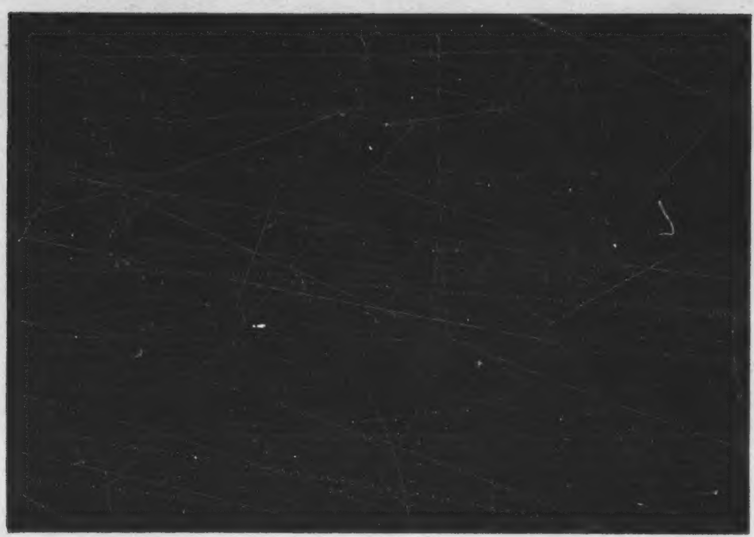
Rectal



Electronic

INFORMATION SHEET

F. Tongue blade/depressor

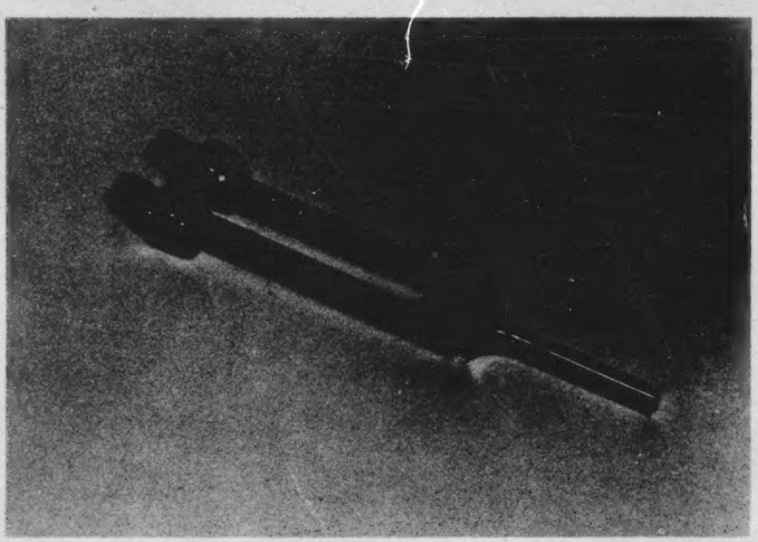


G. Snellen chart

INFORMATION SHEET

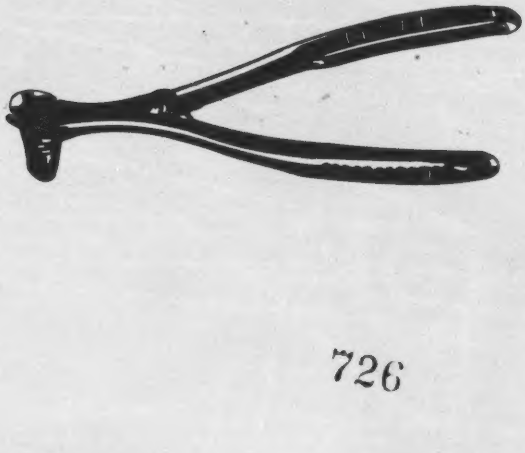
H. Tuning fork

(NOTE: The tuning fork may be used in the neurological examination.)



I. Nasal speculum

(NOTE: Many physicians and nurses use the otoscope with the particular speculum on the tip for examining the nasal passages.)



INFORMATION SHEET

J. Vaginal speculums

(NOTE: Vaginal speculums come in different sizes and materials. Some are metal, to be sterilized after use, and some are plastic and disposable. Others have a light source that is connected to the speculum.)

K. Clean examination gloves

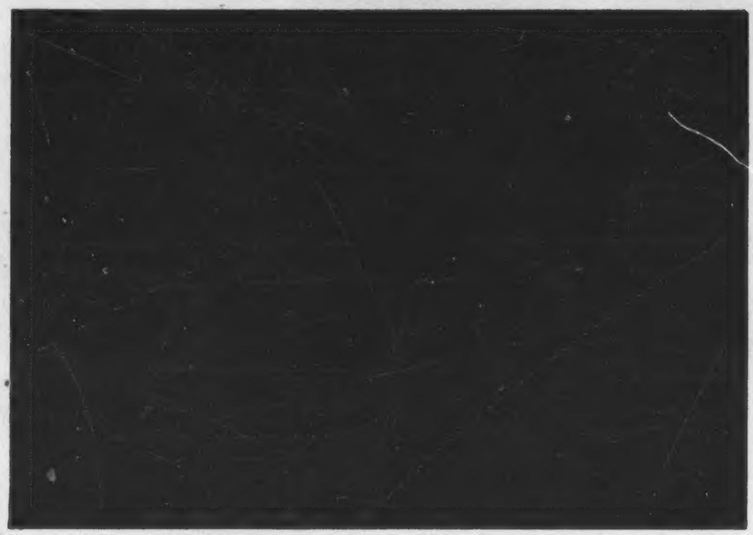
(NOTE: Some procedures call for sterile gloves, but clean gloves can be used for most of the routine procedures performed in a physical assessment. The exam gloves come in "one-size-fits-all," but the sterile gloves are sized. Make sure you know the correct size to fit the person doing the exam.)

INFORMATION SHEET

L. Cotton-tipped swabs and wooden spatulas

(NOTE: The swabs may be clean or sterile, depending on the procedure and what the examiner requests.)

M. Slides, culture plates, or test tubes

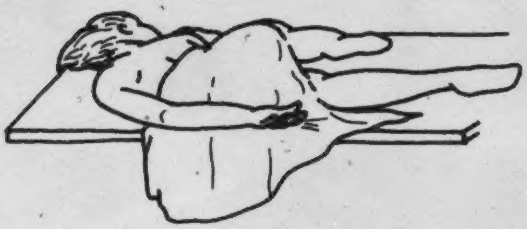


INFORMATION SHEET

XIII. Body positions used in various medical procedures (Job Sheet #2)

A. Sims'

(NOTE: This position is for some rectal, prostatic, and proctological exams.)



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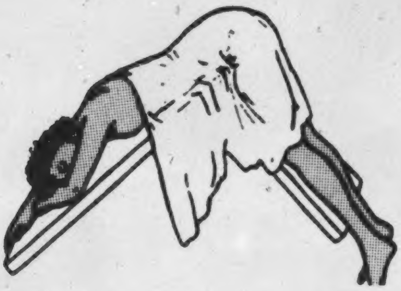
B. Jackknife

(NOTE: This position can be used if a "break exam table" is not available. It is used for most proctological exams because upper intestines fall forward and make examination of lower bowel easier.)



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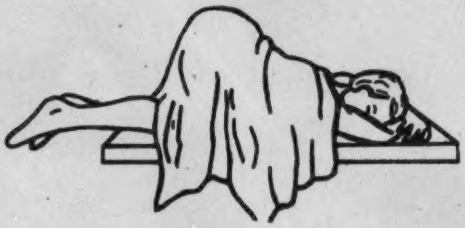
INFORMATION SHEET

C. Knee-chest



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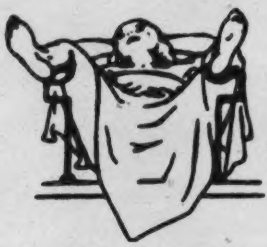
D. Lithotomy

(NOTE: This is basic position used for pelvic exam.)



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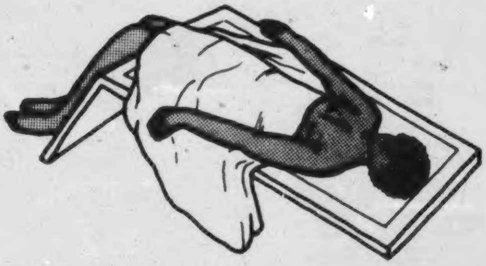
E. Trendelenburg

(NOTE: This position can be used when in X-ray for hiatal hernia.)



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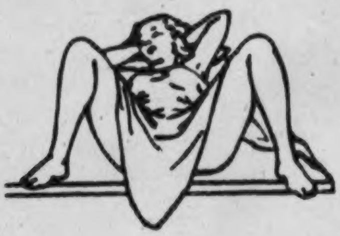
INFORMATION SHEET

F. Dorsal recumbent

(NOTE: This position may be used for pelvic exam when stirrups are not available.)



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XIV. Nurse's functions when assisting with a physical assessment

A. Have all equipment to be used in easy access

B. Explain procedures to patient and offer reassurance

(NOTE: *Never* tell the patient that a certain procedure will not hurt if you know it will. Explain to him or her that there will be some discomfort, pain, or pressure, and approximately how long the procedure will take. If you do not allow the patient to prepare for the procedure and it does cause pain, you will lose the patient's trust and confidence.)

C. Prepare patient by assisting with gown or appropriate drape to make exam easier

D. Position patient according to the procedure taking place

Examples: Knee-chest position for a rectal exam, dorsal recumbent or lithotomy for a vaginal exam

E. Provide as much privacy for the patient as possible

F. Assist the examiner by handing equipment, adjusting lights, holding or repositioning patient

XV. Each area of the physical assessment (Job Sheets #2 and #3)

(NOTE: The physical assessment usually is a head-to-toe procedure. In some cases, depending on the person doing the assessment, this may change and you will need to be ready to assist with any part of the exam, in any order desired. Be ready and alert.)

INFORMATION SHEET

A. Head

1. Is inspected for size and shape

2. Hair and scalp are examined for abnormalities

   Examples: Seborrhea (dandruff), alopecia (hair loss)

3. Face is examined for color, size, and any abnormalities in shape

4. Soft tissues of the head are examined for changes in shape, fluid retention, and sounds within the skull

B. Neck

(NOTE: The neck is examined by inspection, palpation, and auscultation.)

1. Lymph nodes are palpated in the neck for enlargement or lumps

   (NOTE: Most examiners look at size, consistency, mobility, and to see if patient is in pain when these are palpated.)

2. Trachea is examined to see if it lies in the midline or if it moves abnormally

3. Thyroid gland is palpated to check consistency and movement

4. Veins and arteries are examined by palpation and auscultation

   (NOTE: Certain diseases may cause these vessels to distend or collapse; certain sounds may be heard from within the vessels, indicating abnormalities of the circulatory system.)

C. Eye

(NOTE: The Snellen chart may be used to test visual acuity and may be tested by the assistant.)

1. External eye is evaluated by looking at color, shape, clarity, and for abnormal growths

2. Internal examination consists of looking at the tension, muscles, and vessels for abnormalities using the ophthalmoscope

D. Ear

1. Ear is inspected by using otoscope as it is inserted into the external canal

2. Inner canal is inspected for inflammation and abnormal growths

3. Tympanic membrane is inspected for symptoms of hearing problems or infection behind it

INFORMATION SHEET

4. Hearing accuracy can be assessed by the use of many different instruments

   Examples: Tuning fork, electronic devices that produce low and high pitched tones

E. Mouth

(NOTE: Equipment that might be needed would be a good light source, gauze squares, tongue depressor, finger cots, and a pair of sterile or clean gloves.)

1. Questions asked of the patient may include changes in voice, irritation of mouth or throat, if he or she uses tobacco, and if any alcoholic beverages are taken
2. Teeth, tongue, mucosa of the mouth, and palate are examined for growths, abnormalities of color
3. Larynx or voice box may be further examined if patient complains of hoarseness

   (NOTE: A laryngeal mirror specially designed for this purpose may be used.)

F. Thorax and lungs

(NOTE: A preliminary X-ray may be done routinely on each patient or a special series may be ordered by physician.)

1. Location of the thorax, rib cage, and general appearance of the chest

   (NOTE: Assessment of the thorax can tell the examiner information about the patient's musculoskeletal system, the nutritional status, and how the respiratory system is functioning.)
2. Auscultation using the stethoscope can allow the listener to assess the lung capacity and detect abnormal breath sounds when patient inhales and exhales

G. Heart

(NOTE: If physician suspects conditions that may involve the heart, he or she may order a preliminary electrocardiogram.)

1. Examination and palpation of the thorax can allow the examiner to feel the size and location of the heart
2. Auscultation with the stethoscope will allow heart sounds to be assessed

INFORMATION SHEET

H. Breast

(NOTE: It is important that the breasts of the male be examined for abnormalities as well as those of the female. Naturally, it will take more time and more extensive examination to assess the female breasts.)

1. Breast tissue is palpated to check for abnormal growths or inflammation

2. Lymph glands are checked for size and tenderness

   (NOTE: It is best not to assess the female breasts right before the menstrual period as many times there may be some swelling and enlargement of lymph glands at this time. The assistant will want to make a note of this.)

3. Examination of the nipple includes shape, color, discharge, if any, and tenderness

I. Abdomen

(NOTE: It is important to remember that in examining the abdomen, palpating should be the last method of examination. Upon palpation the painful, hyperactive abdominal organs may begin to give out bowel sounds that would limit the true sounds heard in the auscultation process. The order of assessment should be inspection, auscultation, and palpation.)

1. Skin of the abdomen is observed for color changes and elasticity; also, any old scars should be observed and noted

   (NOTE: The abdomen is divided into quadrants and, when noting signs or symptoms, these quadrants should be noted.)

   Example: Old vertical scar approximately five inches long appears in the upper outer quadrant of the abdomen

2. Abdominal sounds will be heard as normal peristaltic waves that assist in digestive process

   (NOTE: The absence of bowel sounds might be an indication of a pathological problem.)

3. Abnormal shapes in the abdomen and its organs may indicate many various conditions

   (NOTE: The liver, spleen, stomach, and much of the intestine can be felt by palpation.)

J. Rectum

(NOTE: Normally, the examiner will only need an examination glove and lubricant, but some physicians may want to use an anascope, an instrument used to dilate the rectal muscle for a more thorough examination.)

INFORMATION SHEET

1. External anal canal is examined for growths, tears, and irritated areas

   (NOTE: External hemorrhoids may be observed at this time.)

2. Rectal muscle or sphincter is examined for tone as the examiner inserts the index finger through; then the inner canal is examined for tears, growths, and internal hermorrhoids

   (NOTE: When the finger is removed, there is usually fecal material that clings to the glove. This material should be examined for color, consistency, and any abnormal contents.)

3. Examination of the prostate gland, found only in the male, is done at this time since the shape and size can be palpated through the rectum

K. Genitalia of the female

(NOTE: This exam can be done with the patient in a dorsal recumbent position if the woman is confined to bed. The examiner may want to proceed with this assessment in a treatment room with an appropriate exam table.)

1. External genitalia are examined by a general inspection of the labia and the entire vulva for growths, color changes, and any discharges from the openings

2. Internal inspection is assisted by the use of the speculum to dilate the canal

   (NOTE: At this time, if any specimens are to be taken, the appropriate equipment should be ready for use. The walls are examined for any growths or inflammation, and the cervix is checked at this time.)

3. Internal and external palpation is done by removal of the speculum and the insertion of the first two fingers of one gloved hand into the canal; the other hand palpates the abdomen

   (NOTE: At this time the ovaries, tubes, and uterus can be examined for abnormal growth.)

L. Genitalia of the male

1. Inspection of the penis and scrotum is done to determine changes in size, color, or shape

2. Skin is inspected for lesions or growths

3. Palpation of the genitalia will show any abnormal masses; the penis can be manipulated if a specimen is required for microscopic exam

INFORMATION SHEET

M. Neurological check and the special senses

(NOTE: This exam takes into consideration the nervous system and the mental status of the patient and may be quite simple or complex, depending on the examiner.)

1. Mental alertness may be examined by asking simple questions, or if a higher level of mentality is evaluated, written tests may be given

2. Physically, the nervous system is checked by tactile response to various stimuli

   (NOTE: The exam may call for sharp instruments, soft instruments, cold and hot devices, and various substances to test the sense of smell. The reflexes may be checked by using a percussion hammer.)

N. Musculoskeletal

1. Extremities are examined to check size, length, and changes in body proportions

2. Joints are examined for range of movement, enlargement, or discoloration

3. Spine is examined for abnormal growth or curvature

4. Mobility is assessed by having patient walk, bend, and flex muscles

XVI. Common contents of the patient's chart

(NOTE: The components of a patient's chart may differ according to the institution and its policies and preference. Learn to identify and be able to pull the correct component out when needed.)

A. Identifying information--Gives general information about the patient; may be called *information* or *admission sheet*

(NOTE: It usually includes his or her name, address, age, social security number, marital status, religious preference, sex, nearest relative, insurance number, and physician's name.)

B. Physician's notes--Usually include history of past and present illness, physical examination, current diagnosis, and prognosis

C. Doctor's orders--Contain all physician's orders

(NOTE: All orders must be signed by the physician.)

D. Progress notes--Are usually written by the physician or representative

E. Laboratory reports--Are records of results of laboratory tests

INFORMATION SHEET

F. Graphic sheets--Are for recording vital signs

G. Nurses' notes--Are for recording care given including daily care, medications, treatments, vital signs, diet, and remarks by the nurses

H. Other special forms--Include diabetic sheet, permission for surgery or other special treatment, intake and output records

XVII. General rules for charting

(NOTE: Charting methods vary in health care institutions. Before charting, consult the nurse in charge about the practices in your particular institution.)

A. Print or write in a neat, legible form; after completing entry, sign name and title

B. When an error in charting is made, usually a line is drawn through the entry and the words "error in charting" are printed above it and initialed; **NEVER** erase an entry or make it illegible

C. Record after completing a task, not before

D. Be exact in recording time, effects, and results of all treatments and procedures

E. Check with health facility to learn the color of ink to be used for charting

(NOTE: If a record is to be microfilmed, black or blue ink may be preferred, as red does not microfilm. Do not use pencil.)

F. Use standard abbreviations only

G. Do not use ditto marks

H. Do not use the word "patient;" the chart refers to the patient

I. Spell correctly; use a dictionary when necessary to check the spelling of a word

J. Make statements clear, concise, and exact

K. Fill out all page headings consistently and completely before charting anything on the page

L. Record entries on "Nurses' Notes" on consecutive lines; do not skip lines

XVIII. Information to remember when documenting patient's condition

A. Time when symptom was observed

B. Location on body, indicating as accurately as possible where symptom was seen

(NOTE: After determining the region of the body, be sure to ask if it is noted in other areas.)

INFORMATION SHEET

C. Duration or length of time symptom or condition lasted

D. Drainage or discharge, including amount, color, and character

Examples: Urine, feces, sputum, wound drainage

E. Frequency, duration, intensity, location, and management of pain

Examples: Intermittent or persistant, severe or moderate, throbbing, dull, or sharp, controlled by medication, if so, what kind; pain worsened or improved by change in body position

F. Change in appearance of patient

Examples: Skin color, expression, or behavior

G. Effects of treatment or nursing measures

H. Complaints of patient using exact words, when indicated

INFORMATION SHEET

XIX. Meanings of common abbreviations, numbers, and symbols used in charting

(NOTE: Others may be found in a dictionary or in books of medical terminology.)

ABBREVIATION	MEANING	ABBREVIATION	MEANING
$\overline{aa}$	of each	CA or ca	cancer
abd	abdomen	cc (c.c.)	cubic centimeters
ac	before meals	CD	communicable disease
ad lib	as needed	cm	centimeter
a.m.	morning	cmpd	compound
amb	ambulatory, walking	clysis	hypodermoclysis; fluid given under skin
amt	amount	c/o	complains of
approx	approximately	CVA	cerebrovascular accident
ax	axillary	DC	discontinue
bid	twice per day	dist	distilled
BMR	basal metabolic rate	dr ʒ	dram
BM	bowel movement	ECG (EKG)	electrocardiogram; tracing of heart function
BP	blood pressure	EEG	electroencephalogram; brain wave tracing
BRP	bathroom privileges	ER	emergency room
c	centigrade	elix	elixir
$\bar{c}$	with	exam	examination

INFORMATION SHEET

ABBREVIATION	MEANING	ABBREVIATION	MEANING
ext	extract	hypo	hypodermically
F	Fahrenheit	invol	involuntary; without knowledge of
Fe	iron	irrig	irrigate or irrigation
fld	fluid	I and O	intake and output
GI	gastrointestinal	IV	intravenous
gm	gram	kg	kilogram
gr	grain	l	liter
gtt	drop	lab	laboratory
GU	genitourinary	lb	pound
gyn	gynecology	liq	liquid
h	hour	LLQ	left lower quadrant; left lower section of abdomen
hi-cal	high calorie	LUQ	left upper quadrant
hi-vit	high vitamin	m	minim
Hgb	hemoglobin	med	medical or medication
H_2O	water	mid	middle
hs	bedtime; hours of sleep	min	minute

INFORMATION SHEET

ABBREVIATION	MEANING	ABBREVIATION	MEANING
mg	milligram	per	by or through
mm	millimeter	per os	by mouth
no or #	number	po	per os; by mouth
noc	night	post-op	post-operative
NPN	nonprotein nitrogen content of blood	prn	when necessary
NPO	nothing by mouth; nothing per os	pre-op	pre-operative
O_2	oxygen	psych	psychology or psychiatry
OB	obstetrics	pt	patient
OR	operating room	PT	physical therapist or therapy
o.d.	right eye	pulv	powder
o.u.	each eye	$\bar{q}$	every
oz ℥	ounce	qd	every day
o.s.	left eye	qh	every hour
ot	occupational therapy	qid	four times per day
p	pulse	qod	every other day
Ped, Peds, or Pedi	pediatrics	qs	quantity sufficient
		r or resp	respirations

INFORMATION SHEET

ABBREVIATION	MEANING	ABBREVIATION	MEANING
RBC	red blood cell	VD	venereal disease
RLQ	right lower quadrant of abdomen	via	by way of
RUQ	right upper quadrant of abdomen	WBC	white blood cell
s̄	without	wt	weight
Sol	solution	I	one
sp gr	specific gravity	II	two
s.s.	soapsuds	III	three
stat	at once	IV	four
surg	surgical	V	five
tab	tablet	VI	six
tid	three times per day	VII	seven
TL	team leader	VIII	eight
TLC	tender, loving care	IX	nine
TPR	temperature, pulse, respiration	X	ten
tr	tincture	XI	eleven
ung	ointment	XII	twelve

INFORMATION SHEET

ABBREVIATION	MEANING	ABBREVIATION	MEANING
et, +, &	and	$\overline{\dot{i}ss}$	one and one-half
iii	three ounces	ʒ $\overline{\dot{i}\dot{i}}$	two drams
ʒ	dram	℥	ounce
$\overline{ss}$	one-half	gr $\overline{ss}$	one-half grain

INITIAL PATIENT ASSESSMENT AND DOCUMENTATION
UNIT V

ASSIGNMENT SHEET #1--RECOGNIZE AND RECORD SUBJECTIVE AND OBJECTIVE SYMPTOMS

NAME ______________________________ SCORE ______________

It is important to be able to know which symptoms are subjective and objective and how to describe in clear terms the symptoms and the patient's behavior, without drawing conclusions or making a medical diagnosis. Given each symptom below, check whether it is a subjective or an objective symptom. Under each word in the space provided, make up a description to indicate what you see or hear the patient telling you. Read your answers in class and discuss your descriptive documentation.

Example:

SYMPTOM	SUBJECTIVE	OBJECTIVE
Dizziness Description: Complains of dizziness, feeling very weak with head swimming and eyes blurry. (NOTE: When charting your observations never use the word *patient*, as it is the patient's chart and would be like repeating *John, he.*)	X	
Bruise Description: Large area of black and blue discoloration noted on upper, anterior right thigh. Appears swollen and feels cool to the touch.		X

SYMPTOM	SUBJECTIVE	OBJECTIVE
1. Swelling DESCRIPTION: ______________________________ ______________________________		
2. Vomiting DESCRIPTION: ______________________________ ______________________________		
3. Anxiety DESCRIPTION: ______________________________ ______________________________		

ASSIGNMENT SHEET #1

SYMPTOM	SUBJECTIVE	OBJECTIVE
4. Rash DESCRIPTION: ________________ ________________________		
5. Confusion DESCRIPTION: ________________ ________________________		
6. Fever DESCRIPTION: ________________ ________________________		
7. Pain DESCRIPTION: ________________ ________________________		
8. Nausea DESCRIPTION: ________________ ________________________		
9. Coughing DESCRIPTION: ________________ ________________________		
10. Cyanosis DESCRIPTION: ________________ ________________________		
11. Abrasions DESCRIPTION: ________________ ________________________		

INITIAL PATIENT ASSESSMENT AND DOCUMENTATION
UNIT V

ASSIGNMENT SHEET #2--TAKE PATIENT HISTORIES

NAME ______________________________ SCORE ______________

Taking accurate and pertinent patient histories takes practice and skill. To know how to obtain the right responses from your patients, you must learn to ask the proper questions and elaborate on the information you need. The first part of this assignment sheet gives you a practice form to use with a classmate. It has some questions that you may ask to obtain more information about a certain subject. Portray a patient with fictitious information or answer the questions with your own health history. Part II of the assignment sheet gives you three patient history forms to be filled out after you have selected patients that you wish to interview. Be sure to tell them you are a student nurse and that you are asking these questions as part of an assignment if they will give you permission. Discuss your findings in class. You might want to use only the initials of your patients.

PART I

I. General patient data:

Admission date: ______________

A. Identification

1. Name or initials: ________________ Age: ____ Sex: ____ Race: ____
2. Marital status: ______________________________
3. Education: ______________________________
4. Household size: ______________________________
5. Occupation: ______________________________
6. Appearance: ______________________________

(NOTE: This is your observation of the patient. Is she or he neat, well-groomed, well-nourished, obese?)

7. Emotional status: ______________________________

____

(NOTE: Again this is your observation. Be very careful only to describe the patient's behavior. **DO NOT** draw any conclusions on your own.)

Questions you might ask if patient appears apprehensive, angry, fearful, etc.:

"Mr. Harris, I notice you keep rubbing your hands together. Do you know why you are doing this?"

ASSIGNMENT SHEET #2

"Ms. Dawson, I noticed you were pacing up and down the hall, is there something bothering you?"

8. Cultural background: ______________________________

____

Questions you might ask:

"Mr. Ramirez, I understand your family came from Mexico. Do you still have family there? Are you able to visit them often?"

9. Financial status (relating to care): ______________________________

____

(NOTE: This information may be taken from admitting slip that states if patient has medical insurance or is on Medicare or Medicaid.)

B. General health history

1. Medical diagnosis

a. Admitting or primary: ______________________________

____

(NOTE: This information may be found on the admitting slip.)

b. Secondary: ______________________________

____

(NOTE: This may not be known unless the patient has a primary diagnosis that has caused the secondary.)

Example: Primary: Diabetes

Secondary: Cellulitis

2. Family history

		Living	Age	Age at Death	Cause of Death
a. Father:					
b. Mother:					
c. Brothers:					

ASSIGNMENT SHEET #2

		Living	Age	Age at Death	Cause of Death
d. Sisters:					

3. Health practices:

a. Recreational:

b. Religious:

c. Nutritional:

Questions you might want to ask:

What are your hobbies?

Do you like any sports? Do you like to participate or watch?

Do you belong to a local church?

(NOTE: You will probably find the religion of your patient on the admitting slip.)

Do you smoke or use tobacco?

Do you consume alcohol? To what degree?

Do you feel you get enough exercise?

What kind of a diet do you take? Do you have distinct likes and dislikes? Any allergies to food?

Do you have a specific food pattern?

Breakfast? Light snacks in morning or at night?

Lunch? Dinner?

ASSIGNMENT SHEET #2

4. Health resources utilized:	Yes	No	See how often?
a. Do you have a family physician?	___	___	________________
b. Do you use the county health facilities?	___	___	________________
c. Do you have a family dentist?	___	___	________________
d. Have you ever seen a psychiatrist?	___	___	________________

5. Allergies:	How managed?
a. Food ________________________	____________________________
________________________	____________________________
b. Drug ________________________	____________________________
________________________	____________________________
c. Other ________________________	____________________________
________________________	____________________________

6. Medications:

a. Are you taking any medications at this time? ____________________

____

Medication	Dosage	Taken how often?
________________	__________	________________
________________	__________	________________
________________	__________	________________
________________	__________	________________

b. Did you bring them to the hospital with you? ____________________

II. Specific assessments

A. Health-illness-psychosocial

1. Perception of illness and hospitalization: ____________________

____

ASSIGNMENT SHEET #2

a. What brought you to the hospital?

b. What is your understanding of your illness?

c. Have you ever been in a hospital before?

d. Did you feel you received good treatment?

e. What were you hospitalized for?

f. How do you feel about your illness?

g. What role will your family or friends play while you are hospitalized?

(NOTE: Patient may be able to tell you that children will be cared for by relatives or that friends will be watering plants, taking in the mail, or other tasks.)

2. General level of understanding and ability to communicate:

(NOTE: This is another area that you will want to observe and comment on in your history notes. If patient has difficulty understanding your terminology, lower your level of word usage. Be able to speak and answer questions using terms he or she understands.)

ASSIGNMENT SHEET #2

B. Physiological functions and appearance

(NOTE: These areas can be addressed in your notes as to what you observe of your patient. Just write in clear comments beside each area.)

1. Sensory--Stimuli response

a. Mental status: ______________________________

____

Examples: Alert, confused, disoriented, depressed, irritable, dizzy

(NOTE: It is better to use descriptive notes describing the patient's behavior as used in Assignment Sheet #1.)

b. Vision: ______________________________

____

Examples: Glasses, contact lenses, headaches, blurred vision

(NOTE: You may be able to observe some of your patient's vision problems or you may question him or her.)

c. Hearing: ______________________________

____

Examples: Wears hearing aid, hearing loss in one or both ears

d. Communication: ______________________________

____

Examples: Speaks clearly, speaks a different language, outgoing, relates to other people well, makes good eye contact

2. Neurological: ______________________________

____

Examples: Alert, disoriented, confused, poor memory, gait, dizziness, seizures, tremors

(NOTE: You may be able to observe these symptoms or you may need to question the patient.)

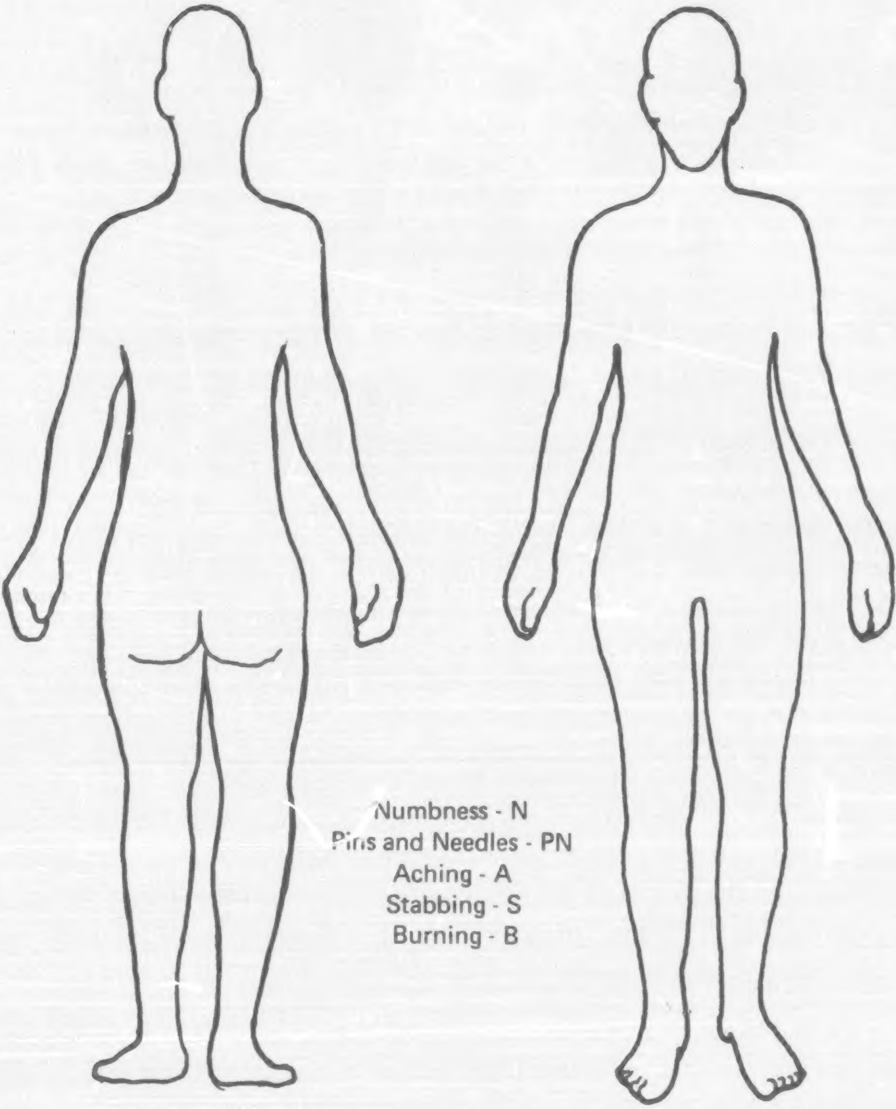
ASSIGNMENT SHEET #2

3. Integument: ____

____

____

If possible, use the pictures below to show areas of problems. Use the symbols to show certain conditions. Shade in areas and note bruises, rashes, discolorations, or other problems.



Numbness - N
Pins and Needles - PN
Aching - A
Stabbing - S
Burning - B

ASSIGNMENT SHEET #2

4. Respiratory: ______________________________

Examples: Unusual breath sounds; malformed chest; cough, non-productive or productive; respiratory aids that you notice

5. Cardiovascular: ______________________________

Examples: Vital signs, pulse, respiration, blood pressure, temperature, color and temperature of extremities, pacemaker or other aids, edema, complaints of dizziness

6. Gastrointestinal:

   a. Nutritional: ______________________________

   Examples: Appetite, food preferences, dentures, any complaints or discomforts before or after eating

   b. Elimination: ______________________________

   Examples: Constipation, diarrhea, bowel habit patterns, any hemorrhoids

7. Urinary: ______________________________

Examples: Gets up at night to urinate, pain, frequency, dribbling

8. Reproductive:

Male: ______________________

Examples: Genital infections, prostate problems, impotence, sexual activity

Female: ______________________

Examples: Menstrual history, pregnancies, menopausal age, pain, discharge, last pap smear, sexual activity, birth control method

9. Musculoskeletal: ______________________________

Examples: Gait, muscle tone, spinal curvatures, supportive aids or prosthesis

ASSIGNMENT SHEET #2

PART II

Admission date: ____________

I. General patient data:

A. Identification

1. Name or initials: ________________ Age: ___ Sex: ___ Race: ___
2. Marital status: ______________________________
3. Education: ______________________________
4. Household size: ______________________________
5. Occupation: ______________________________
6. Appearance: ______________________________
7. Emotional status: ______________________________
____
8. Cultural background: ______________________________
____
9. Financial status (relating to care): ______________________________
____

B. General health history

1. Medical diagnosis

a. Admitting or primary: ______________________________
____
____

b. Secondary: ______________________________
____
____

ASSIGNMENT SHEET #2

2. Family history

		Living	Age	Age at Death	Cause of Death
a. Father:	______	______	______	______	______
b. Mother:	______	______	______	______	______
c. Brothers:	______	______	______	______	______
	______	______	______	______	______
	______	______	______	______	______
	______	______	______	______	______
d. Sisters:	______	______	______	______	______
	______	______	______	______	______
	______	______	______	______	______
	______	______	______	______	______

3. Health practices:

a. Recreational: ____

____

b. Religious: ____

____

c. Nutritional: ____

____

4. Health resources utilized:	Yes	No	See how often?
a. Do you have a family physician?	___	___	______________
b. Do you utilize any of the county facilities?	___	___	______________
c. Do you have a family dentist?	___	___	______________
d. Have you ever seen a psychiatrist?	___	___	______________

ASSIGNMENT SHEET #2

5. Allergies:	How managed?
a. Food ____________________	____________________
b. Drug ____________________	____________________
c. Other ____________________	____________________

6. Medications:

a. Are you taking any medications at this time? ____________________

____

Medication	Dosage	Taken how often?

b. Did you bring them to the hospital with you? ____________________

____

II. Specific assessments

A. Health-illness-psychosocial

1. Perception of illness and hospitalization: ____________________

____

____

a. What brought you to the hospital? ____________________

____

____

b. What is your understanding of your illness? ____________________

____

____

ASSIGNMENT SHEET #2

c. Have you ever been in a hospital before? ______________________

____

____

d. Did you feel you received good treatment? ____________________

____

____

e. What were you hospitalized for? __________________________

____

____

f. How do you feel about your illness? ________________________

____

____

g. What role will your family or friends play while you are hospitalized?

____

____

2. General level of understanding and ability to communicate: __________

____

____

B. Physiological functions and appearance

1. Sensory-Stimuli response

a. Mental status: ______________________________

____

____

b. Vision: ___________________________________

____

____

ASSIGNMENT SHEET #2

c. Hearing: ______________________________

____

____

d. Communication: ______________________________

____

____

2. Neurological: ______________________________

____

____

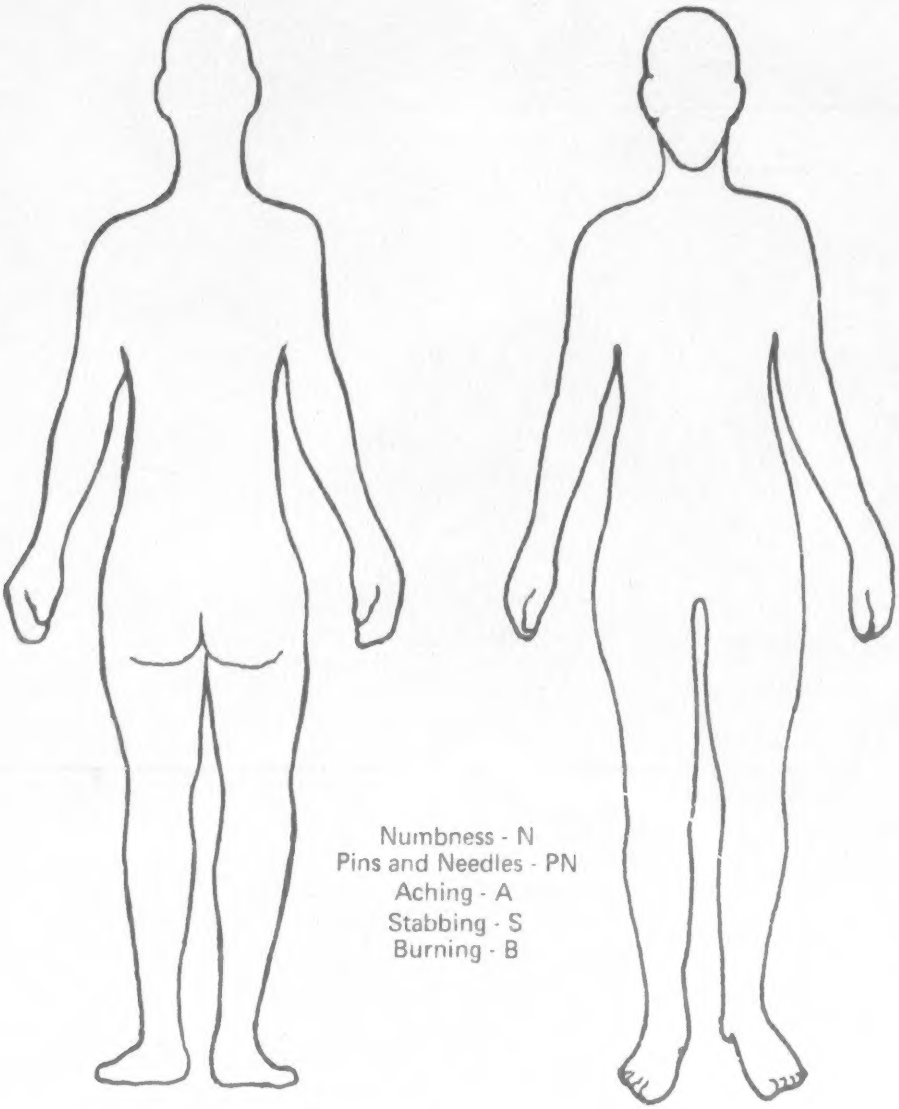
ASSIGNMENT SHEET #2

3. Integument: ______________________________

____

____

If possible, use the pictures below to show areas of problems. Use the symbols to show certain conditions. Shade in areas and note bruises, rashes, discolorations, or other problems.



Numbness - N
Pins and Needles - PN
Aching - A
Stabbing - S
Burning - B

ASSIGNMENT SHEET #2

4. Respiratory: ______________________________________

____

____

5. Cardiovascular: ______________________________________

____

____

6. Gastrointestinal:

   a. Nutritional-- ______________________________________

   ____

   b. Elimination-- ______________________________________

   ____

7. Urinary: ______________________________________

____

____

8. Reproductive: ______________________________________

____

____

9. Musculoskeletal: ______________________________________

____

____

ASSIGNMENT SHEET #2

PART II

Admission date: ____________

I. General patient data:

A. Identification

1. Name or initials: ________________ Age: ____ Sex: ____ Race: ____
2. Marital status: ______________________________
3. Education: ______________________________
4. Household size: ______________________________
5. Occupation: ______________________________
6. Appearance: ______________________________
7. Emotional status: ______________________________
____
8. Cultural background: ______________________________
____
9. Financial status (relating to care): ______________________________
____

B. General health history

1. Medical diagnosis
   a. Admitting or primary: ______________________________
   ____
   ____
   b. Secondary: ______________________________
   ____
   ____

ASSIGNMENT SHEET #2

2. Family history

			Living	Age	Age at Death	Cause of Death
a.	Father:					
b.	Mother:					
c.	Brothers:					
d.	Sisters:					

3. Health practices:

a. Recreational: ______________________________

____

b. Religious: ______________________________

____

c. Nutritional: ______________________________

____

4. Health resources utilized:	Yes	No	See how often?
a. Do you have a family physician?			
b. Do you utilize any of the county facilities?			
c. Do you have a family dentist?			
d. Have you ever seen a psychiatrist?			

ASSIGNMENT SHEET #2

5. Allergies: How managed?

   a. Food ____________ ____________

   b. Drug ____________ ____________

   c. Other ____________ ____________

6. Medications:

   a. Are you taking any medications at this time? ____________

   ____

Medication	Dosage	Taken how often?

   b. Did you bring them to the hospital with you? ____________

   ____

II. Specific assessments

A. Health-illness-psychosocial

1. Perception of illness and hospitalization: ____________

   ____

   ____

   a. What brought you to the hospital? ____________

   ____

   ____

   b. What is your understanding of your illness? ____________

   ____

   ____

ASSIGNMENT SHEET #2

c. Have you ever been in a hospital before? ______________________

____

____

d. Did you feel you received good treatment? ______________________

____

____

e. What were you hospitalized for? ______________________

____

____

f. How do you feel about your illness? ______________________

____

____

g. What role will your family or friends play while you are hospitalized?

____

____

2. General level of understanding and ability to communicate: __________

____

____

B. Physiological functions and appearance

1. Sensory--Stimuli response

a. Mental status: ______________________

____

____

b. Vision: ______________________

____

____

ASSIGNMENT SHEET #2

c. Hearing: ______________________________

____

____

d. Communication: ______________________________

____

____

2. Neurological: ______________________________

____

____

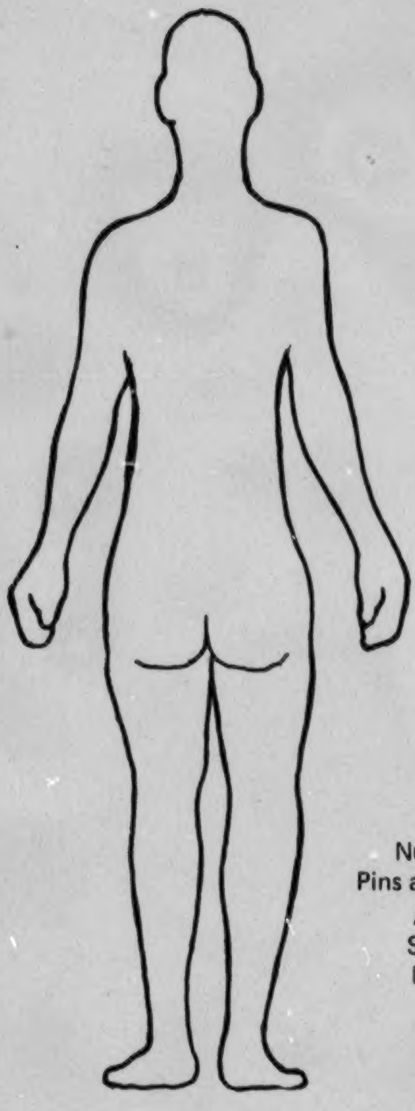
ASSIGNMENT SHEET #2

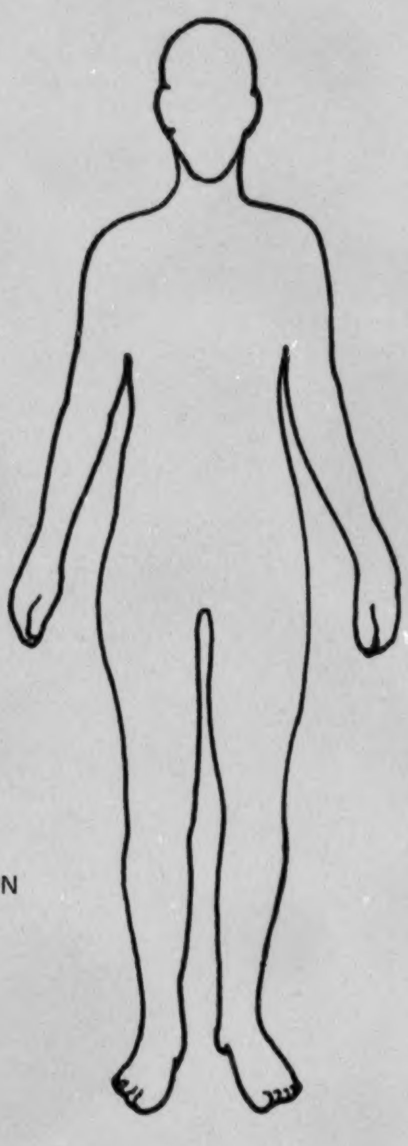
3. Integument: ____

____

Examples: Skin condition--general, hair, feet, nails, specific conditions noticed

If possible, use the pictures below to show areas of problems. Use the symbols to show certain conditions. Shade in areas and note bruises, rashes, discolorations, or other problems.





Numbness - N
Pins and needles - PN
Aching - A
Stabbing - S
Burning - B

ASSIGNMENT SHEET #2

4. Respiratory: ____________________

5. Cardiovascular: ____________________

6. Gastrointestinal:

   a. Nutritional-- ____________________

   b. Elimination-- ____________________

7. Urinary: ____________________

8. Reproductive: ____________________

9. Musculoskeletal: ____________________

ASSIGNMENT SHEET #2

PART II

Admission date: ____________

I. General patient data:

A. Identification

1. Name or initials: ______________ Age: ___ Sex: ___ Race: ___
2. Marital status: ______________________________
3. Education: ______________________________
4. Household size: ______________________________
5. Occupation: ______________________________
6. Appearance: ______________________________
7. Emotional status: ______________________________
____
8. Cultural background: ______________________________
____
9. Financial status (relating to care): ______________________
____

B. General health history

1. Medical diagnosis
   a. Admitting or primary: ______________________
   ____
   ____
   b. Secondary: ______________________________
   ____
   ____

ASSIGNMENT SHEET #2

2. Family history

		Living	Age	Age at Death	Cause of Death
a. Father:					
b. Mother:					
c. Brothers:					
d. Sisters:					

3. Health practices:

a. Recreational: ______________________

____

b. Religious: ______________________

____

c. Nutritional: ______________________

____

4. Health resources utilized:	Yes	No	See how often?
a. Do you have a family physician?			
b. Do you utilize any of the county facilities?			
c. Do you have a family dentist?			
d. Have you ever seen a psychiatrist?			

ASSIGNMENT SHEET #2

5. Allergies: How managed?

a. Food ____________________ ____________________

b. Drug ____________________ ____________________

c. Other ____________________ ____________________

6. Medications:

a. Are you taking any medications at this time? ____________________

____

Medication	Dosage	Taken how often?

b. Did you bring them to the hospital with you? ____________________

____

II. Specific assessments

A. Health-illness-psychosocial

1. Perception of illness and hospitalization: ____________________

____

____

a. What brought you to the hospital? ____________________

____

____

b. What is your understanding of your illness? ____________________

____

____

ASSIGNMENT SHEET #2

c. Have you ever been in a hospital before? ____________________

d. Did you feel you received good treatment? ____________________

e. What were you hospitalized for? ____________________

f. How do you feel about your illness? ____________________

g. What role will your family or friends play while you are hospitalized?

2. General level of understanding and ability to communicate: ____________

B. Physiological functions and appearance

1. Sensory-Stimuli response

a. Mental status: ____________________

b. Vision: ____________________

ASSIGNMENT SHEET #2

c. Hearing: ____________________

d. Communication: ____________________

2. Neurological: ____________________

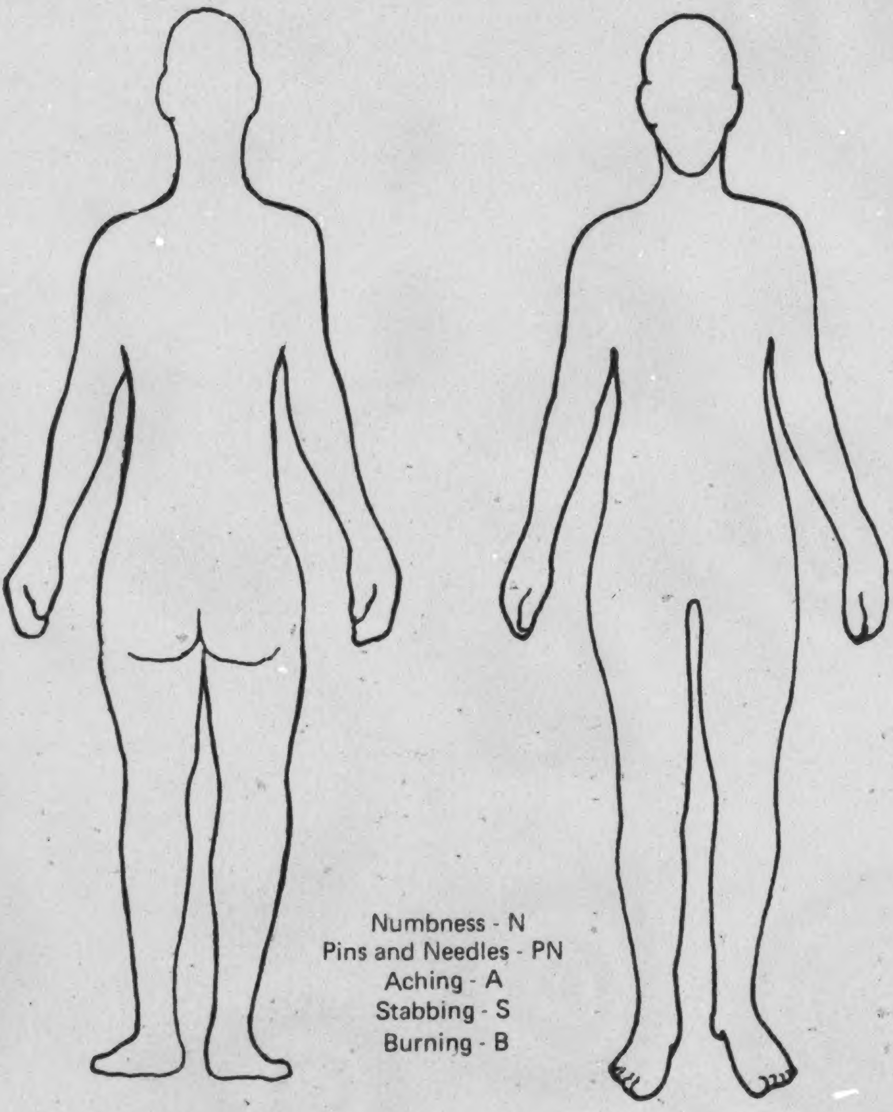
ASSIGNMENT SHEET #2

3. Integument: ______________________________________

____

____

If possible, use the pictures below to show areas of problems. Use the symbols to show certain conditions. Shade in areas and note bruises, rashes, discolorations, or other problems.



Numbness - N
Pins and Needles - PN
Aching - A
Stabbing - S
Burning - B

ASSIGNMENT SHEET #2

4. Respiratory: ____________________

____

____

5. Cardiovascular: ____________________

____

____

6. Gastrointestinal:

   a. Nutritional-- ____________________

   ____

   b. Elimination-- ____________________

   ____

7. Urinary: ____________________

____

____

8. Reproductive: ____________________

____

____

9. Musculoskeletal: ____________________

____

____

INITIAL PATIENT ASSESSMENT AND DOCUMENTATION
UNIT V

JOB SHEET #1--PREPARE OPHTHALMOSCOPE AND OTOSCOPE FOR USE

(NOTE: As a routine, most physicians will want to examine the patient's eyes, ears, and nose. The nurse should have equipment ready for use.)

I. Equipment

  A. Ophthalmoscope

  B. Otoscope

  C. Cleansing solution or alcohol swabs

II. Procedure

  A. Remove ophthalmoscope and otoscope from cases

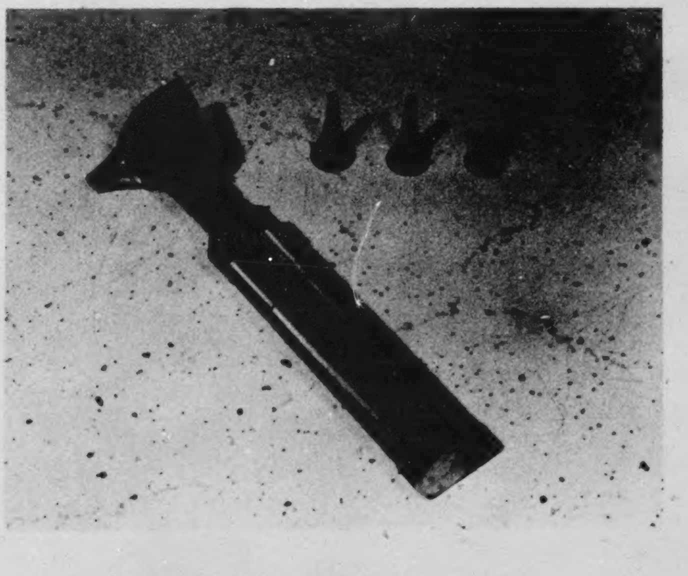
  B. Make sure that light sources for each are working

  (NOTE: Most of these instruments can be recharged from any electrical outlet or their own power source. Check periodically to make sure light source is ready.)

  C. Lay out the tips to use for the otoscope that the physician may need (Figure 1)

  (NOTE: There are different cone-shaped speculums [tips] that are used for different types of exams. It is especially important to use a smaller tip for the pediatric patient.)

FIGURE 1



JOB SHEET #1

D. Place a tongue blade out on a paper towel or gauze pad

(NOTE: Many times physicians will use the light source to look at the patient's mouth and throat, using the tongue blade to stabilize the tongue and move it so that a more thorough exam can be done.)

E. Clean instruments after use or discard properly if disposable

(NOTE: Many manufacturers will recommend a cleansing solution for tips used in direct contact with patient's body. Make sure that each piece of equipment is cleaned thoroughly.)

F. Make sure light source is off and replace instruments in cases

JOB SHEET #1

III. Checklist for preparing ophthalmoscope and otoscope for use

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________________________		
B. Removed ophthalmoscope and otoscope from cases	☐	☐
Comments: ______________________________		
C. Made sure that light sources for each were working	☐	☐
Comments: ______________________________		
D. Laid out the tips to use for the otoscope that the physician might need	☐	☐
Comments: ______________________________		

JOB SHEET #1

		Performed well	Needs improvement
E.	Placed a tongue blade out on a paper towel or gauze pad	☐	☐

Comments: ______________________________

____

____

F.	Cleaned instruments after use or discarded properly if disposable	☐	☐

Comments: ______________________________

____

____

G.	Made sure light source was off and replaced instruments in cases	☐	☐

Comments: ______________________________

____

____

INITIAL PATIENT ASSESSMENT AND DOCUMENTATION
UNIT V

JOB SHEET #2-POSITION AND DRAPE PATIENTS FOR COMMON MEDICAL/DIAGNOSTIC PROCEDURES

I. Equipment

  A. Towels

  B. Sheets or paper drapes

  C. Gown

II. Procedure for lithotomy position

  A. Assist patient in gowning if needed

  B. Make sure patient has emptied bladder before exam

  C. Place patient in dorsal-recumbent position on exam table

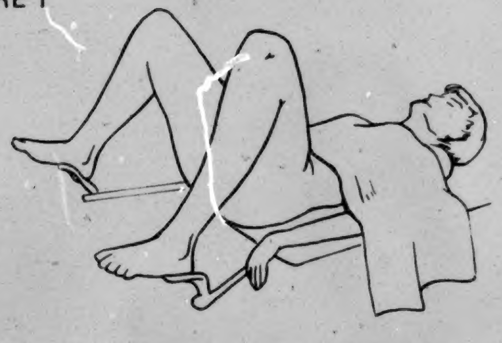
  D. Cover with paper drape, sheet, or towel according to physician's preference

  E. Ask patient to move toward end of exam table

  F. Place feet in stirrups (Figure 1)

  (NOTE: Some tables will have stirrups that fit under knees and calf. This position can be uncomfortable if assumed for a long period of time. Make sure that exam will take place as soon as patient has been positioned.)

FIGURE 1



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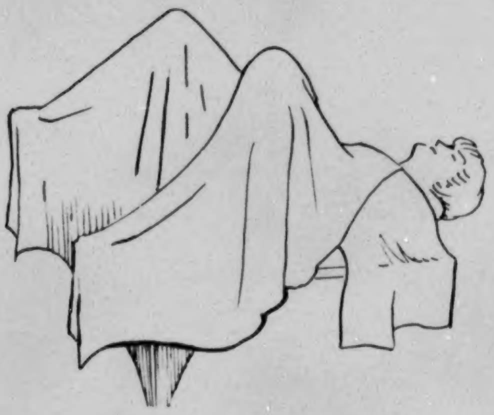
JOB SHEET #2

G. Turn sheet on the diagonal with one corner hanging loose over edge of table (Figure 2)

FIGURE 2



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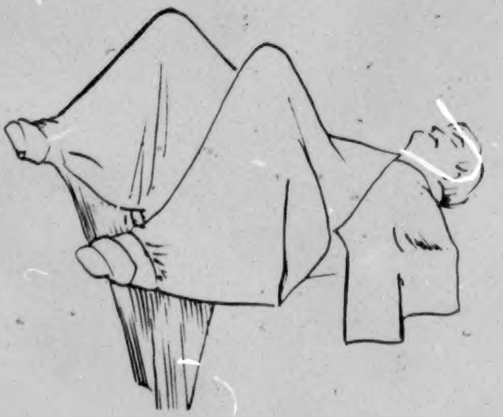
H. Wrap corners on each side around each foot in the stirrups (Figure 3)

FIGURE 3



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I. Fold back center corner to expose vulva for exam

(NOTE: Some physicians prefer the fenestrated or open drape to be placed over the vulva.)

JOB SHEET #2

III. Procedure for Sims' position

A. Assist patient in gowning if needed

B. Position patient on flat exam table with weight on left side and chest

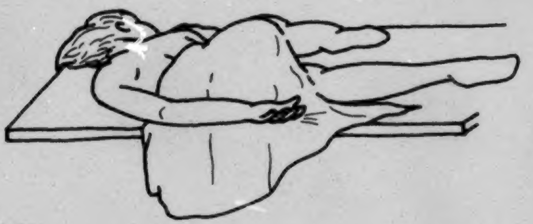
C. Place left arm along the back

D. Instruct patient to move buttocks over to side of table

E. Instruct patient to pull right knee up close to chest

F. Place a sheet loosely over patient, covering chest and knees (Figure 4)

FIGURE 4



Adapted with permission of the Macmillan Company from *Textbook of the Principles and Practices of Nursing*, 5th ed., by Bertha Hammer and Virginia Henderson, copyright 1955, page 563.

G. Fold back over to expose rectal area when physician is ready for exam

IV. Procedure for knee-chest position

A. Position patient flat on table on upper chest and knees

(NOTE: Prepare patient for this exam just before procedure takes place. Do not position patient and expect him or her to remain for a long period of time.)

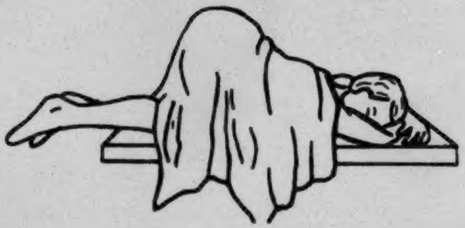
B. Align knees directly under buttocks so that thighs are vertical and buttocks are as high as possible

C. Make sure knees are slightly apart and patient has turned head to side

JOB SHEET #2

D. Place a sheet loosely over patient from shoulders to knees (Figure 5)

FIGURE 5



Adapted with permission of the Macmillan Company from *Textbook of the Principles and Practices of Nursing*, 5th ed., by Bertha Hammer and Virginia Henderson, copyright 1955, page 563.

JOB SHEET #2

V. Checklist for positioning and draping patients for lithotomy position

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ____________________		
B.	Assisted patient in gowning if needed	☐	☐
	Comments: ____________________		
C.	Made sure patient had emptied bladder before exam	☐	☐
	Comments: ____________________		
D.	Placed patient in dorsal-recumbent position on exam table	☐	☐
	Comments: ____________________		
E.	Covered with paper drape, sheet, or towel according to physician's preference	☐	☐
	Comments: ____________________		

JOB SHEET #2

		Performed well	Needs improvement
F.	Asked patient to move toward end of exam table	☐	☐
	Comments: ____________________		
G.	Placed feet in stirrups	☐	☐
	Comments: ____________________		
H.	Turned sheet on the diagonal with one corner hanging loose over edge of table	☐	☐
	Comments: ____________________		
I.	Wrapped corners on each side around each foot in the stirrups	☐	☐
	Comments: ____________________		
J.	Folded back center corner to expose vulva for exam	☐	☐
	Comments: ____________________		

JOB SHEET #2

VI. Checklist for positioning and draping patients in Sims' position

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ________________________________ ________________________________ ________________________________		
B. Assisted patient in gowning if needed	☐	☐
Comments: ________________________________ ________________________________ ________________________________		
C. Positioned patient on flat exam table with weight on left side and chest	☐	☐
Comments: ________________________________ ________________________________ ________________________________		
D. Placed left arm along the back	☐	☐
Comments: ________________________________ ________________________________ ________________________________		
E. Instructed patient to move buttocks over to side of table	☐	☐
Comments: ________________________________ ________________________________ ________________________________		

JOB SHEET #2

Performed well   Needs improvement

F. Instructed patient to pull right knee up close to chest ☐ ☐

Comments: ______________________________

____

____

G. Placed a sheet loosely over patient, covering chest and knees ☐ ☐

Comments: ______________________________

____

____

H. Folded back over to expose rectal area when physician was ready for exam ☐ ☐

Comments: ______________________________

____

____

VII. Checklist for positioning and draping patients for knee-chest position

Performed well   Needs improvement

A. Gathered necessary equipment ☐ ☐

Comments: ______________________________

____

____

B. Positioned patient flat on table on upper chest and knees ☐ ☐

Comments: ______________________________

____

____

JOB SHEET #2

	Performed well	Needs improvement
C. Aligned knees directly under buttocks so that thighs were vertical and buttocks were as high as possible	☐	☐
Comments: ________________________________		
D. Made sure knees were slightly apart and patient had turned head to side	☐	☐
Comments: ________________________________		
E. Placed a sheet loosely over patient from shoulders to knees	☐	☐
Comments: ________________________________		

INITAL PATIENT ASSESSMENT AND DOCUMENTATION
UNIT V

JOB SHEET #3--ASSIST WITH COMPLETE PHYSICAL ASSESSMENT

(NOTE: Equipment to be collected will depend on the area in which the physical assessment will be done. If at bedside, all the equipment will be brought to the unit, but if assessment is done in a treatment or examination room, most equipment will be available. Check to make sure all equipment needed is there and in working order.)

I. Equipment

   A. Tongue depressor

   B. Flashlight, penlight

   C. Stethoscope

   D. Sphygmomanometer

   E. Percussion hammer

   F. Ophthalmoscope

   G. Otoscope

   H. Exam gloves or sterile gloves

   I. Lubricant

   J. Speculums

   Examples: Vaginal speculum, nasal speculum, anascope

   K. Tissues or gauze squares

   L. Bath blanket, sheets, gowns, or drapes

   M. Paper towels

   N. Neuro check equipment (if this procedure will take place)

   O. Snellen chart

   P. Tuning fork

   Q. Cotton-tipped swabs and wooden spatulas

   R. Culture plates, slides, or test tubes (if specimens are taken)

JOB SHEET #3

II. Procedure

A. Wash hands

B. Assemble equipment

C. Identify patient, explain procedure, and reassure

D. Provide privacy

E. Offer bedpan, urinal, or assist patient to bathroom

(NOTE: If a specimen is needed, this would be an excellent time to get one. It is recommended, if possible, that the patient empty the bladder before the exam.)

F. Wash hands

G. Arrange proper lighting

H. Adjust bed or exam table to desired position

I. Replace top covers with bath blanket or cover

(NOTE: If using exam room, use sheets, drapes, or appropriate cover.)

J. Unfasten patient's gown

K. Keep alert as to what equipment is needed next

L. Hand equipment ready for use

M. Reposition patient when necessary

N. Reassure patient when needed

O. Use paper towels to receive contaminated equipment

P. Prepare cultures or specimens correctly and make sure the correct form is placed with it

Q. Assist the patient when the exam is over to cleanse as needed; assist back into gown

R. Assist patient back to room or if confined to bed, make comfortable

S. Place communication device within patient's reach

T. Remove equipment and care for it properly

Examples: Wash equipment using the proper solution if it is to be reused after proper sterilization or disinfection; dispose of all disposable items properly

JOB SHEET #3

U. Return all equipment to proper place

V. Wash hands

W. Record procedures and any pertinent facts on proper forms

JOB SHEET #3

III. Checklist for assisting with complete physical assessment

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ______________________________		
B.	Washed hands; assembled equipment	☐	☐
	Comments: ______________________________		
C.	Identified patient, explained procedure, and reassured patient	☐	☐
	Comments: ______________________________		
D.	Provided privacy	☐	☐
	Comments: ______________________________		
E.	Offered bedpan, urinal, or assisted patient to bathroom	☐	☐
	Comments: ______________________________		

JOB SHEET #3

		Performed well	Needs improvement
F.	Washed hands; arranged proper lighting	☐	☐
	Comments:		
G.	Adjusted bed or exam table to desired position	☐	☐
	Comments:		
H.	Replaced top covers with bath blanket or cover	☐	☐
	Comments:		
I.	Unfastened patient's gown	☐	☐
	Comments:		
J.	Kept alert as to what equipment was needed next	☐	☐
	Comments:		

JOB SHEET #3

		Performed well	Needs improvement
K.	Handed equipment ready for use	☐	☐

Comments: ____________________

____

____

L.	Repositioned patient when necessary	☐	☐

Comments: ____________________

____

____

M.	Reassured patient when needed	☐	☐

Comments: ____________________

____

____

N.	Used paper towels to receive contaminated equipment	☐	☐

Comments: ____________________

____

____

O.	Prepared cultures or specimens correctly and made sure the correct form was placed with it	☐	☐

Comments: ____________________

____

____

JOB SHEET #3

		Performed well	Needs improvement
P.	Assisted the patient when the exam was over to cleanse as needed; assisted back into gown	☐	☐
	Comments: ______________________________		
Q.	Assisted patient back to room or if confined to bed, made comfortable	☐	☐
	Comments: ______________________________		
R.	Placed communications device within patient's reach	☐	☐
	Comments: ______________________________		
S.	Removed equipment and cared for it properly	☐	☐
	Comments: ______________________________		
T.	Returned all equipment to proper place	☐	☐
	Comments: ______________________________		

JOB SHEET #3

	Performed well	Needs improvement
U. Washed hands	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
V. Recorded procedures and any pertinent facts on proper forms	☐	☐

Comments: ______________________________

____

____

INITIAL PATIENT ASSESSMENT AND DOCUMENTATION
UNIT V

TEST

NAME______________________________ SCORE____________

1. Match terms associated with initial patient assessment to the correct definitions. Write the correct numbers in the blanks.

_____a. First fundamental step of the physical assessment when observer looks over the patient generally, then more specifically, in different areas

_____b. Evaluation of the neurological system

_____c. Inflatable cuff attached to a measurement device that is used to assess blood pressure

_____d. Course of action that includes patient assessment, planning, implementation, and evaluation of care

_____e. Act of feeling with the hand by applying light pressure to various parts of the body that can be assessed

_____f. Act of recognizing and noting facts or occurrences

_____g. Meeting at which information is obtained

_____h. First step in the nursing process that consists of three problem solving activities: data collection, data organization, and formulation of a nursing diagnosis

_____i. Introductory, identifying information that helps the nurse when interviewing

_____j. Issue or problem that has brought the patient to seek help

_____k. Philosophy of psychologist Abraham Maslow that each person has a basic set of needs that is arranged according to priority

_____l. Method devised for making or doing something or attaining an end

1. Nursing process
2. Assessment
3. Plan
4. Neuro check
5. Sphygmomanometer
6. Patient profile
7. Interview
8. Maslow's hierarchy of human needs
9. Inspection
10. Palpation
11. Chief complaint
12. Observation

______m. Evidence of disease or of a patient's condition, shown by a change in body or mental state

______n. Carrying out a plan of action

______o. Chart imprinted with black letters that is used for testing visual acuity

______p. Sound produced within the body which can be heard by a trained ear by the use of a stethoscope

______q. Contains those things or actions the nurse and other staff plan to do in order to help patients achieve goals

______r. Act of striking a part with short, sharp blows as an aid in diagnosing the condition of the parts beneath the sound obtained

______s. Something meriting special attention in advance of other things

______t. To inspect closely

______u. Statement of a present or potential patient condition based on diagnostic procedures

______v. Statement of a present or potential patient problem that requires nursing intervention

13. Symptoms
14. Auscultation
15. Examination
16. Patient care plan
17. Priority
18. Percussion
19. Implementation
20. Snellen chart
21. Nursing diagnosis
22. Medical diagnosis

2. Select from the following list advantages of the patient care plan. Write an "X" in the correct blanks.

______a. Nursing Board requires it be done

______b. Provides job satisfaction

______c. Eliminates daily visits from physician

______d. Decreases amount of paper work

______e. Provides professional growth

______f. Provides continuation and consistency in patient care

______g. Saves time

______h. Aids in making staff assignments

______i. Eliminates need for medical diagnosis _____j. Improves the quality of care

_____k. Promotes participation of patient

3. Describe steps of the nursing process.

a. Assessing-- ____

____

____

____

____

____

b. Planning-- ____

____

____

____

____

____

c. Implementing-- ______________________________________

____

____

____

d. Evaluating-- _______________________________________

____

____

____

____

____

4. Distinguish between subjective and objective data. Write an "S" for subjective data and an "O" for objective data in the correct blanks.

_____a. Information obtained by direct observation that can be clearly seen by other observers

_____b. Nurses interpret information differently _____c. Information given by patients

_____d. Facts or behaviors are stated as the nurse observes them, without any conclusions being drawn

5. List methods of collecting data for patient assessment.

a. ____________________

b. ____________________

c. ____________________

6. Describe skills involved in observation.

a. Looking-- ____________________

b. Listening-- ____________________

c. Smelling-- ____________________

d. Talking-- ____________________

e. Touching or feeling-- ____________________

7. Select from the following list purposes of observing and keeping documented records. Write an "X" in the correct blanks.

_____a. Serve as a guide in planning and implementing the nursing process

_____b. Fill requirement made by Nursing Board

_____c. Record progress being made by the patient and assist the physician in diagnosis and in planning further medical care

_____d. Serve as source of information for research and for medical or nursing students _____e. Insure optimum patient care

_____f. Aid other health workers in the care and treatment of the patient and family

_____g. Help justify pay increases for nurses

_____h. Provide a continuous, detailed account of the patient's behavior, illness, treatment, medication, and nursing care

_____i. Provide statistical information for local, state, and national health service planning

_____j. Communicate to family and friends status of the patient

_____k. Give information for press releases

_____l. Provide information if needed in legal proceedings

8. Match Maslow's common basic needs to the correct definitions. Write the correct numbers in the blanks.

_____a. Need to continue to grow and change; working toward future goals

_____b. Things which make a person feel safe

_____c. Things that make a person feel good about herself or himself; pride in one's ability and accomplishments

_____d. Those that must be met for survival

_____e. Need to give and receive love and affection

1. Love and belonging
2. Esteem
3. Self-actualization
4. Safety and security
5. Physiological

9. Arrange in order Maslow's common basic needs. Write a "1" for the first need, a "2" for the second, and so on.

_____a. Esteem

_____b. Physiological

_____c. Love and belonging

_____d. Self-actualization

_____e. Safety and security

10. Select from the following list areas of information that may be found in a patient interview. Write an "X" in the correct blanks.

_____a. Past medical history

_____b. Financial status

_____c. Abnormal cardiac sounds

_____d. Chief complaint

_____e. Natural hair color

_____f. Patient profile

_____g. History of present illness

_____h. Social Security number

11. State factors to remember when filling out a patient history.

a. ____

____

b. ____

____

c. ____

____

d. ____

____

e. ____

____

f. ____

____

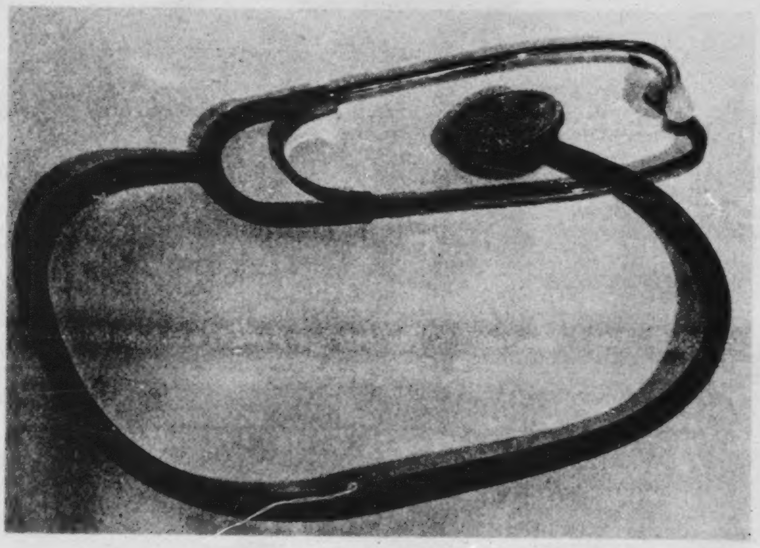
g. ____

____

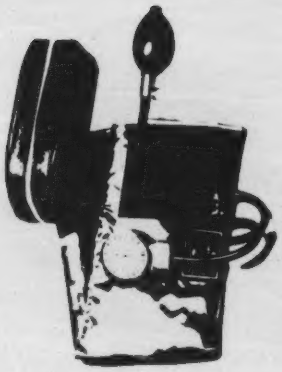
h. ____

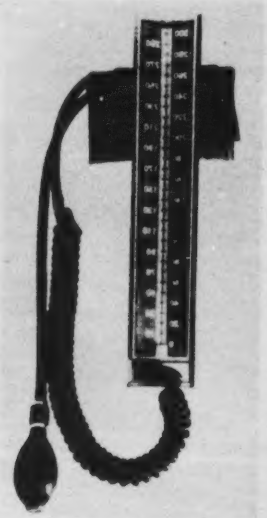
____

12. Identify equipment needed to complete a physical assessment.

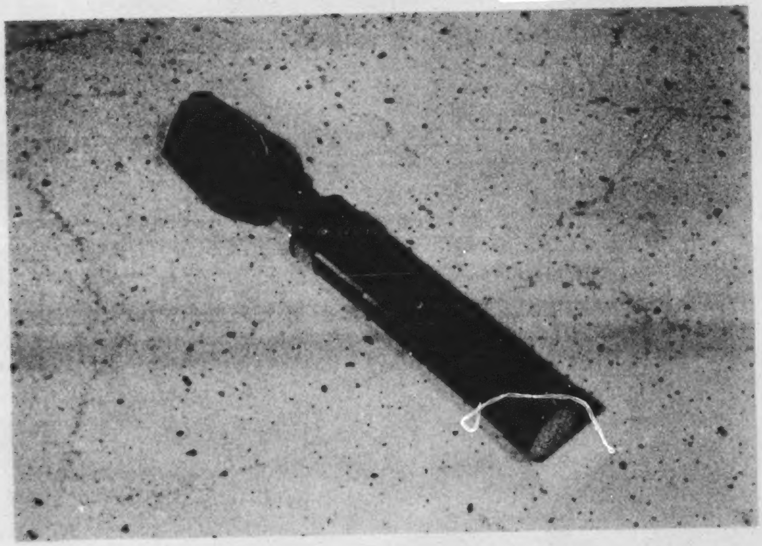


a. ______________________________

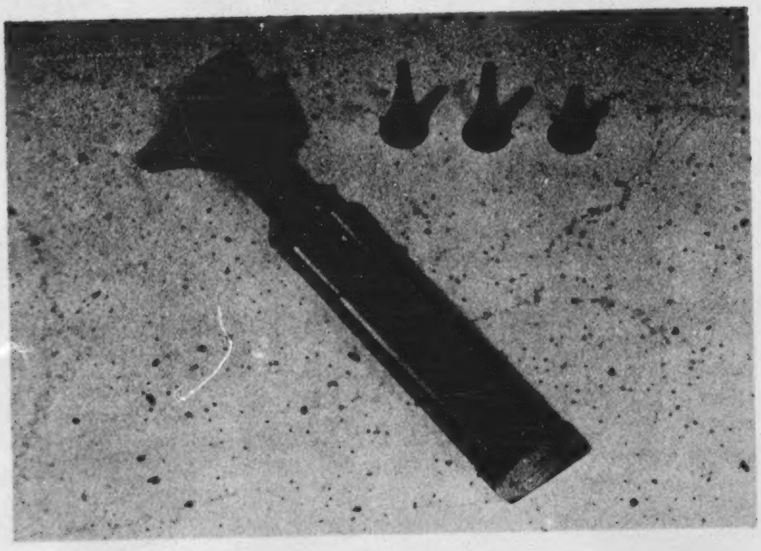




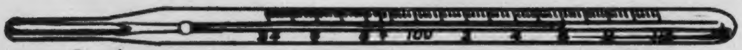
b. ______________________________



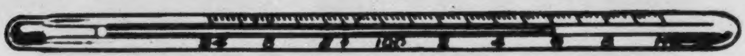
c. ______________________________



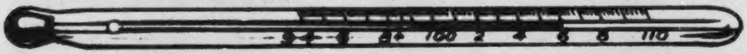
d. ______________________________



Oral



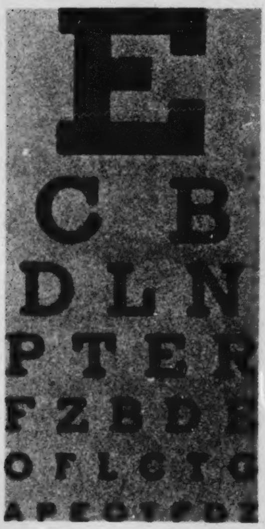
Security



Rectal

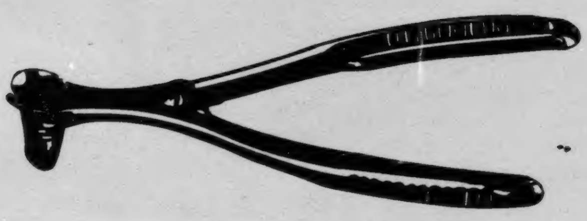
e. ______________________________

f. ______________________________

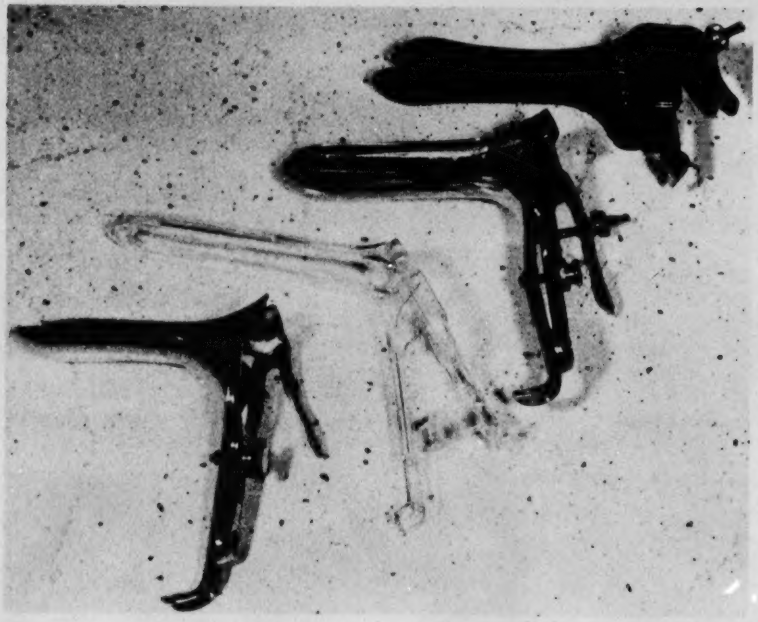

E
C B
D L N
P T E R
F Z B D E
O F L C T G

g. ______________________________

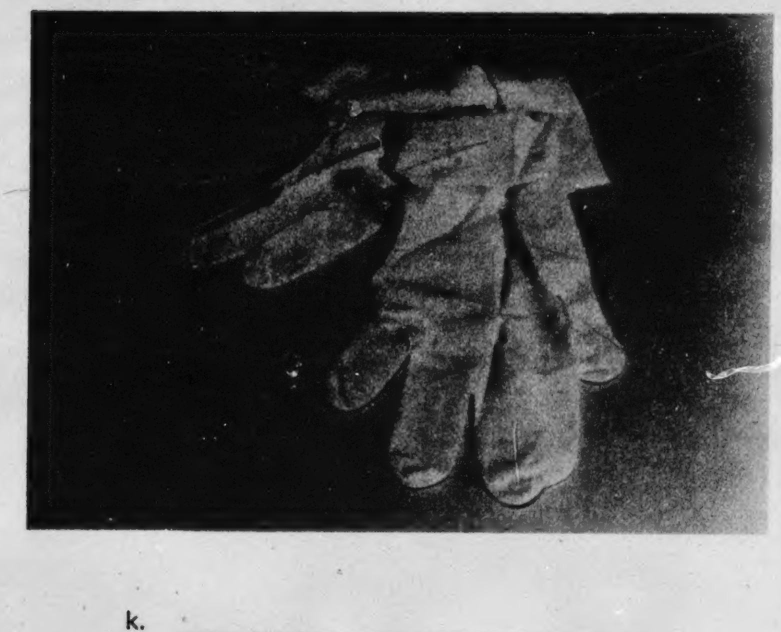
h. ______________________________



i. ______________________________



j. ______________________________

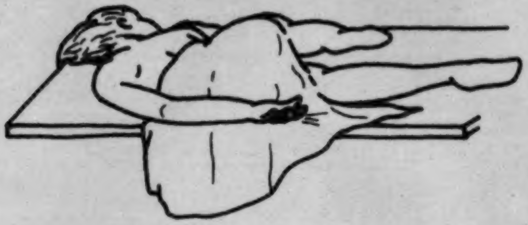


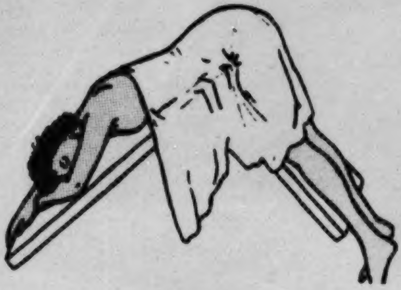
k. ______________________________

l.

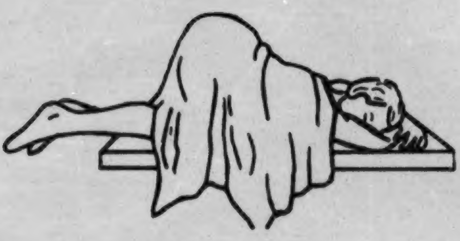
m.

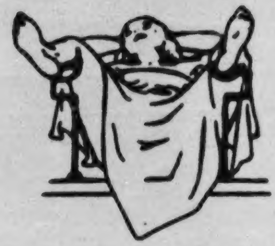
13. Identify the following body positions used in various medical procedures.



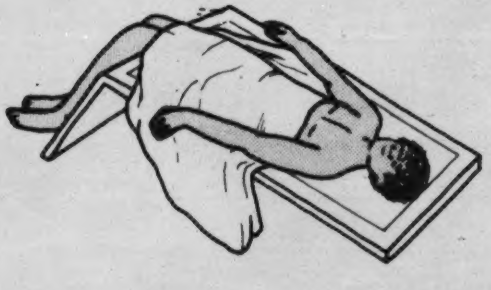


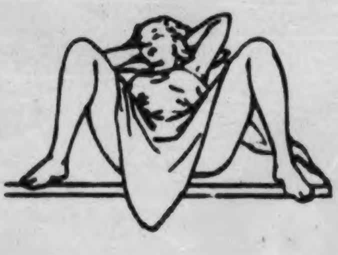
a. ______________________ b. ______________________





c. ______________________ d. ______________________





e. ______________________ f. ______________________

Lithotomy
Knee-chest
Dorsal recumbent

Sims'
Jackknife
Trendelenburg

14. State the nurse's functions when assisting with a physical assessment.

a. ______________________________

____

b. ______________________________

____

c. ______________________________

____

d. ______________________________

____

e. ______________________________

____

f. ______________________________

____

15. Describe each area of the physical assessment.

a. Head-- ______________________________

____

____

____

b. Neck-- ______________________________

____

____

____

____

c. Eye-- ______________________________

____

____

____

____

d. Ear-- __________

e. Mouth-- __________

f. Thorax and lungs-- __________

g. Heart-- __________

h. Breast-- __________

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i. Abdomen-- ____________________

j. Rectum-- ____________________

k. Genitalia of the female-- ____________________

l. Genitalia of the male-- ____________________

m. Neurological check and the special senses-- ____________________

____

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____

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____

n. Musculoskeletal-- ____________________________

____

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____

____

16. Match common contents of the patient's chart to the correct descriptions. Write the correct numbers in the blanks.

_____a. Are usually written by the physician or representative

_____b. Are for recording care given including daily care, medications, treatments, vital signs, diet, and remarks by the nurses

_____c. Usually include history of past and present illness, physical examination, current diagnosis, and prognosis

_____d. Contain all physician's orders

_____e. Are for recording vital signs

_____f. Include diabetic sheet, permission for surgery or other special treatment, intake and output records

_____g. Gives general information about the patient; may be called *information* or *admission sheet*

_____h. Are records of results of laboratory tests

1. Identifying information
2. Physician's notes
3. Doctor's orders
4. Progress notes
5. Laboratory reports
6. Graphic sheets
7. Nurses' notes
8. Other special forms

17. State general rules for charting.

a. ______________________________

____

b. ______________________________

____

c. ______________________________

____

d. ______________________________

____

e. ______________________________

____

f. ______________________________

____

g. ______________________________

____

h. ______________________________

____

i. ______________________________

____

j. ______________________________

____

k. ______________________________

____

l. ______________________________

____

18. State information to remember when documenting patient's condition.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

g. ______________________________

h. ______________________________

19. Write the meanings of common abbreviations, numbers, and symbols used in charting below.

ABBREVIATION	MEANING	ABBREVIATION	MEANING
āā		CA or ca	
abd		cc (c.c.)	
ac		CD	
ad lib		cm	
a.m.		cmpd	
amb		clysis	
amt		c/o	
approx		CVA	
ax		DC	
bid		dist	
BMR		dr ʒ	
BM		ECG (EKG)	
BP		EEG	
BRP		ER	
c		elix	
c̄		exam	

ABBREVIATION	MEANING	ABBREVIATION	MEANING
ext		hypo	
F		invol	
Fe		irrig	
fld		I and O	
GI		IV	
gm		kg	
gr		l	
gtt		lab	
GU		lb	
gyn		liq	
h		LLQ	
hi-cal		LUQ	
hi-vit		m	
Hgb		med	
H_2O		mid	
hs		min	

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ABBREVIATION	MEANING	ABBREVIATION	MEANING
mg		per	
mm		per os	
no or #		po	
noc		post-op	
NPN		prn	
NPO		pre-op	
O_2		psych	
OB		pt	
OR		PT	
o.d.		pulv	
o.u.		q̄	
oz ℥		qd	
o.s.		qh	
ot		qid	
p		qod	
Ped, Peds, or Pedi		qs	
		r or resp	

ABBREVIATION	MEANING	ABBREVIATION	MEANING
RBC		VD	
RLQ		via	
RUQ		WBC	
s̄		wt	
Sol		I	
sp gr		II	
s.s.		III	
stat		IV	
surg		V	
tab		VI	
tid		VII	
TL		VIII	
TLC		IX	
TPR		X	
tr		XI	
ung		XII	

ABBREVIATION	MEANING	ABBREVIATION	MEANING
et, +, &		$\overline{\text{iss}}$	
iii		ʒii	
ʒ		ʒ	
$\overline{\text{ss}}$		gr $\overline{\text{ss}}$	

20. Recognize and record subjective and objective symptoms.

21. Take patient histories.

22. Demonstrate the ability to:

    a. Prepare ophthalmoscope and otoscope for use.

    b. Position and drape patients for common medical/diagnostic procedures.

    c. Assist with complete physical assessment.

    (NOTE: If activities 20-22 have not been finished before the test, ask your instructor when they should be completed.)

INITIAL PATIENT ASSESSMENT AND DOCUMENTATION
UNIT V

ANSWERS TO TEST

1.	a.	9	f.	12	k.	8	p.	14	u.	22
	b.	4	g.	7	l.	3	q.	16	v.	21
	c.	5	h.	2	m.	13	r.	18		
	d.	1	i.	6	n.	19	s.	17		
	e.	10	j.	11	o.	20	t.	15		

2. b, e, f, h, j, k

3. Descriptions should include:

   a. Assessing

      1) Conduct the nursing history
      2) Perform or assist with the physical examination
      3) Interview the patient's family and/or others
      4) Study the patient's health profile
      5) Formulate the nursing diagnosis

   b. Planning

      1) Assign priority to the nursing diagnosis
      2) Specify the goals
      3) Identify the nursing actions to attain goals
      4) Develop the written patient care plan using clear, correct terminology
      5) Involve the patient and family in all aspects of the care-planning

   c. Implementing

      1) Put the patient care plan into action
      2) Coordinate the plan with all team members, including patient and family
      3) Record the patient's responses to the actions

d. Evaluating

1) Collect objective data

2) Compare the patient's responses to the short-term and long-term goals; determine if the goals were achieved

3) Identify the changes or adjustments that need to be made in the care plan

4. a. O c. S

b. S d. O

5. a. Observation

b. Interview

c. Examination

6. Descriptions should include:

a. Looking

1) Note facial expression for alertness, pain or discomfort, satisfaction, worry, or other reactions

2) Check skin for color, rashes, temperature, evidence of pressure, breaks, or other abnormal conditions

3) Note patient's surroundings for orderliness, attractiveness, comfort, convenience, and safety

4) Observe other factors concerning the patient's condition, such as amount, character, and color of body discharges or drainage from wounds

b. Listening

1) Hear not only the words of the patient but the tone of voice and hidden meanings

2) Note quality of respirations, restlessness, wakefulness, or signs of disorientation

3) Be aware of characteristic sounds of special equipment, such as respirators or heart monitors

4) Develop special listening skill using a stethoscope

c. Smelling

1) Note any unusual odors in the environment

2) Observe changes in the characteristic odor of human excreta and drainage from wounds

- d. Talking
    - 1) Nurse's manner of speaking conveys attitude and response
    - 2) Skillful questioning is essential in gaining information from patients
    - 3) Communication with members of the health team and/or the family aids in patient care and planning
- e. Touching or feeling
    - 1) Sense of touch detects abnormalities of skin or temperature
    - 2) Taking the pulse is one of the most valuable observations by touch
    - 3) Nurse's touch communicates security and ability to the patient

7. a, c, d, f, h, i, l

8. a. 3
    b. 4
    c. 2
    d. 5
    e. 1

9. a. 4
    b. 1
    c. 3
    d. 5
    e. 2

10. a, d, f, g

11. a. Put the patient at ease; make him or her as comfortable as possible
    b. Allow the patient to express self fully
    c. Make sure the patient understands your questions and convey that you are not prying or judging patient's personal life
    d. Communicate at a level that the patient understands
    e. Be aware of any nonverbal gestures that may indicate feelings about certain subjects
    f. Obtain the information on another sheet of paper if you have difficulty keeping up with the speed of the history, then transfer to the permanent form
    g. Write clearly and neatly on the permanent history form, as this will be a basis for the nursing process
    h. Ask questions if you do not understand or if you need more information on a certain topic

12. a. Stethoscope
   b. Sphygmomanometer
   c. Ophthalmoscope
   d. Otoscope with various sizes of specula
   e. Thermometers
   f. Tongue blade/depressor
   g. Snellen chart
   h. Tuning fork
   i. Nasal speculum
   j. Vaginal speculums
   k. Clean examination gloves
   l. Cotton-tipped swabs and wooden spatulas
   m. Slides, culture plates, or test tubes

13. a. Sims'
   b. Jackknife
   c. Knee-chest
   d. Lithotomy
   e. Trendelenburg
   f. Dorsal recumbent

14. a. Have all equipment to be used in easy access
   b. Explain procedures to patient and offer reassurance
   c. Prepare patient by assisting with gown or appropriate drape to make exam easier
   d. Position patient according to the procedure taking place
   e. Provide as much privacy for the patient as possible
   f. Assist the examiner by handing equipment, adjusting lights, holding or repositioning patient

15. Descriptions should include:

   a. Head

      1) Is inspected for size and shape
      2) Hair and scalp are examined for abnormalities
      3) Face is examined for color, size, and any abnormalities in shape
      4) Soft tissues of the head are examined for changes in shape, fluid retention, and sounds within the skull

b. Neck

1) Lymph nodes are palpated in the neck for enlargement or lumps

2) Trachea is examined to see if it lies in the midline or if it moves abnormally

3) Thyroid gland is palpated to check consistency and movement

4) Veins and arteries are examined by palpation and auscultation

c. Eye

1) External eye is evaluated by looking at color, shape, clarity, and for abnormal growths

2) Internal examination consists of looking at the tension, muscles, and vessels for abnormalities using the ophthalmoscope

d. Ear

1) Ear is inspected by using otoscope as it is inserted into the external canal

2) Inner canal is inspected for inflammation and abnormal growths

3) Tympanic membrane is inspected for symptoms of hearing problems or infection behind it

4) Hearing accuracy can be assessed by the use of many different instruments

e. Mouth

1) Questions asked of the patient may include changes in voice, irritation of mouth or throat, if he or she uses tobacco, and if any alcoholic beverages are taken

2) Teeth, tongue, mucosa of the mouth, and palate are examined for growths, abnormalities of color

3) Larynx or voice box may be further examined if patient complains of hoarseness

f. Thorax and lungs

1) Location of the thorax, rib cage, and general appearance of the chest

2) Auscultation using the stethoscope can allow the listener to assess the lung capacity and detect abnormal breath sounds when patient inhales and exhales

g. Heart

1) Examination and palpation of the thorax can allow the examiner to feel the size and location of the heart

2) Auscultation with the stethoscope will allow heart sounds to be assessed

h. Breast

1) Breast tissue is palpated to check for abnormal growths or inflammation

2) Lymph glands are checked for size and tenderness

3) Examination of the nipple includes shape, color, discharge, if any, and tenderness

i. Abdomen

1) Skin of the abdomen is observed for color changes and elasticity; also, any old scars should be observed and noted

2) Abdominal sounds will be heard as normal peristaltic waves that assist in digestive process

3) Abnormal shapes in the abdomen and its organs may indicate many various conditions

j. Rectum

1) External anal canal is examined for growths, tears, and irritated areas

2) Rectal muscle or sphincter is examined for tone as the examiner inserts the index finger through; then the inner canal is examined for tears, growths, and internal hermorrhoids

3) Examination of the prostate gland, found only in the male, is done at this time since the shape and size can be palpated through the rectum

k. Genitalia of the female

1) External genitalia are examined by a general inspection of the labia and the entire vulva for growths, color changes, and any discharges from the openings

2) Internal inspection is assisted by the use of the speculum to dilate the canal

3) Internal and external palpation is done by removal of the speculum and the insertion of the first two fingers of one gloved hand into the canal; the other hand palpates the abdomen

l. Genitalia of the male

  1) Inspection of the penis and scrotum is done to determine changes in size, color, or shape

  2) Skin is inspected for lesions or growths

  3) Palpation of the genitalia will show any abnormal masses; the penis can be manipulated if a specimen is required for microscopic exam

m. Neurological check and the special senses

  1) Mental alertness may be examined by asking simple questions, or if a higher level of mentality is evaluated, written tests may be given

  2) Physically, the nervous system is checked by tactile response to various stimuli

n. Musculoskeletal

  1) Extremities are examined to check size, length, and changes in body proportions

  2) Joints are examined for range of movement, enlargement, or discoloration

  3) Spine is examined for abnormal growth or curvature

  4) Mobility is assessed by having patient walk, bend, and flex muscles

16. a. 4
b. 7
c. 2
d. 3
e. 6
f. 8
g. 1
h. 5

17. a. Print or write in a neat, legible form; after completing entry, sign name and title

b. When an error in charting is made, usually a line is drawn through the entry and the words "error in charting" are printed above it and initialed; **NEVER** erase an entry or make it illegible

c. Record after completing a task, not before

d. Be exact in recording time, effects, and results of all treatments and procedures

e. Check with health facility to learn the color of ink to be used for charting

f. Use standard abbreviations only

g. Do not use ditto marks

h. Do not use the word "patient;" the chart refers to the patient

i. Spell correctly; use a dictionary when necessary to check the spelling of a word

j. Make statements clear, concise, and exact

k. Fill out all page headings consistently and completely before charting anything on the page

l. Record entries on "Nurses' Notes" on consecutive lines; do not skip lines

18. a. Time when symptom was observed

b. Location on body, indicating as accurately as possible where symptom was seen

c. Duration or length of time symptom or condition lasted

d. Drainage or discharge, including amount, color, and character

e. Frequency, duration, intensity, location, and management of pain

f. Change in appearance of patient

g. Effects of treatment or nursing measures

h. Complaints of patient using exact words, when indicated

19.

ABBREVIATION	MEANING	ABBREVIATION	MEANING
āā	of each	CA or ca	cancer
abd	abdomen	cc (c.c.)	cubic centimeters
ac	before meals	CD	communicable disease
ad lib	as needed	cm	centimeter
a.m.	morning	cmpd	compound
amb	ambulatory, walking	clysis	hypodermoclysis; fluid given under skin
amt	amount	c/o	complains of
approx	approximately	CVA	cerebrovascular accident
ax	axillary	DC	discontinue
bid	twice per day	dist	distilled
BMR	basal metabolic rate	dr ʒ	dram
BM	bowel movement	ECG (EKG)	electrocardiogram; tracing of heart function
BP	blood pressure	EEG	electroencephalogram; brain wave tracing
BRP	bathroom privileges	ER	emergency room
c	centigrade	elix	elixir
c̄	with	exam	examination

ABBREVIATION	MEANING	ABBREVIATION	MEANING
ext	extract	hypo	hypodermically
F	Fahrenheit	invol	involuntary; without knowledge of
Fe	iron	irrig	irrigate or irrigation
fld	fluid	I and O	intake and output
GI	gastrointestinal	IV	intravenous
gm	gram	kg	kilogram
gr	grain	l	liter
gtt	drop	lab	laboratory
GU	genitourinary	lb	pound
gyn	gynecology	liq	liquid
h	hour	LLQ	left lower quadrant; left lower section of abdomen
hi-cal	high calorie	LUQ	left upper quadrant
hi-vit	high vitamin	m	minim
Hgb	hemoglobin	med	medical or medication
H_2O	water	mid	middle
hs	bedtime; hours of sleep	min	minute

ABBREVIATION	MEANING	ABBREVIATION	MEANING
mg	milligram	per	by or through
mm	millimeter	per os	by mouth
no or #	number	po	per os; by mouth
noc	night	post-op	post-operative
NPN	nonprotein nitrogen content of blood	prn	when necessary
NPO	nothing by mouth; nothing per os	pre-op	pre-operative
O_2	oxygen	psych	psychology or psychiatry
OB	obstetrics	pt	patient
OR	operating room	PT	physical therapist or therapy
o.d.	right eye	pulv	powder
o.u.	each eye	$\bar{q}$	every
oz ℥	ounce	qd	every day
o.s.	left eye	qh	every hour
ot	occupational therapy	qid	four times per day
p	pulse	qod	every other day
Ped, Peds, or Pedi	pediatrics	qs	quantity sufficient
		r or resp	respirations

492-C

ABBREVIATION	MEANING	ABBREVIATION	MEANING
RBC	red blood cell	VD	venereal disease
RLQ	right lower quadrant of abdomen	via	by way of
RUQ	right upper quadrant of abdomen	WBC	white blood cell
s̄	without	wt	weight
Sol	solution	I	one
sp gr	specific gravity	II	two
s.s.	soapsuds	III	three
stat	at once	IV	four
surg	surgical	V	five
tab	tablet	VI	six
tid	three times per day	VII	seven
TL	team leader	VIII	eight
TLC	tender, loving care	IX	nine
TPR	temperature, pulse, respiration	X	ten
tr	tincture	XI	eleven
ung	ointment	XII	twelve

ABBREVIATION	MEANING	ABBREVIATION	MEANING
et, +, &	and	$\overline{\text{i}}$ss	one and one-half
iii	three ounces	ʒ$\overline{\text{ii}}$	two drams
ʒ	dram	℥	ounce
$\overline{\text{ss}}$	one-half	gr $\overline{\text{ss}}$	one-half grain

20. Evaluated to the satisfaction of the instructor

21. Evaluated to the satisfaction of the instructor

22. Performance skills evaluated to the satisfaction of the instructor

THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of the integumentary system to assess the condition of skin. The student should also be able to demonstrate skills that promote patient cleanliness and stimulate circulation. This knowledge will be evidenced by completion of assignment sheet, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the integumentary system and patient cleanliness to the correct definitions.
2. Distinguish between layers of the skin.
3. Match the appendages of the skin to their functions.
4. Identify the parts of the skin.
5. Describe the functions of the skin.
6. Select from a list characteristics of healthy skin.
7. Describe changes in the skin that take place during the aging process.
8. Select from a list steps to follow when assessing the condition of the skin.
9. Match abnormalities of the skin to their descriptions.
10. Select from a list factors that may cause a patient to develop decubiti.
11. Describe methods to prevent decubiti.
12. Select from a list purposes of daily body care.
13. List routine morning care procedures.
14. Assess condition of the skin.
15. Demonstrate the ability to:
    a. Assist with a tub bath or shower.
    b. Assist with a sitz bath.

c. Assist with or give a partial or self-help bath.

d. Give a complete bed bath.

e. Apply anti-embolism stockings.

f. Give range-of-motion exercises (active and passive).

g. Give a back rub.

h. Assist with oral hygiene.

i. Comb and shampoo hair.

j. Shave a patient.

k. Give care to an incontinent patient.

THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

A. Provide students with objective sheet.

B. Provide students with information sheet and make transparency.

C. Discuss unit and specific objectives.

D. Discuss information sheet.

E. Obtain slides and a microscope for students to see the shapes and forms of skin cells.

(NOTE: Students may be able to use scrapings of their own skin or animal skin.)

F. Obtain animal skin and dissect; show students layers of skin and tissue.

G. Show pictures of various decubiti and discuss the different methods of treatment.

H. Provide students with assignment sheets.

(NOTE: Assist the students with descriptions of the skin they are assessing so that they will become more comfortable in writing their observations.)

I. Provide students with job sheets.

J. Discuss and demonstrate procedures outlined in job sheets.

K. Provide equipment in the clinical laboratory and allow students to practice job skills.

L. Allow time for return demonstrations.

(NOTE: Roleplaying can be helpful in all of these skills. Each classmate may take his or her turn in being the patient and the nurse.)

M. Give test.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Transparency Master: TM 1--The Skin

D. Assignment Sheet #1--Assess Condition of the Skin

E. Job sheets

1. Job Sheet #1--Assist with a Tub Bath or Shower
2. Job Sheet #2--Assist with a Sitz Bath
3. Job Sheet #3--Assist With or Give a Partial or Self-help Bath
4. Job Sheet #4--Give a Complete Bed Bath
5. Job Sheet #5--Apply Anti-Embolism Stockings
6. Job Sheet #6--Give Range-of-Motion Exercises (Active and Passive)
7. Job Sheet #7--Give a Back Rub
8. Job Sheet #8--Assist with Oral Hygiene
9. Job Sheet #9--Comb and Shampoo Hair
10. Job Sheet #10--Shave a Patient
11. Job Sheet #11--Give Care to an Incontinent Patient

F. Test

G. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study.* Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

B. Sloan, Jamee. *Health Service Careers.* Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1979.

C. Memmler, Ruth, and Wood, Dena Lin. *The Human Body in Health and Disease.* Philadelphia: J.B. Lippincott Company, 1977.

D. Scherer, Jeanne C. *Introductory Medical-Surgical Nursing.* Philadelphia: J.B. Lippincott Company, 1977.

IV. Filmstrips:

(NOTE: The following filmstrips are available from the Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.)

A. *Skin Care and Bathing Preparation.*

B. *Physical Assessment: The Skin and Extremities.*

C. *Recognition and Prevention of Bed Sores.*

D. *Giving the Patient a Bed Bath.*

E. *Showers and Tub Baths.*

F. *Range of Motion Exercises to Prevent Contractures.*

THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

INFORMATION SHEET

I. Terms associated with the integumentary system and patient cleanliness

A. Integument--Skin or covering, including sweat and oil glands

B. Dermatology--Study of the skin

C. Appendage--Anything attached to a larger or major part

D. Stratified--Arranged in layers

E. Squamous--Covered with or consisting of scales

F. Epithelium--Outer layer of cells of the skin

G. Regeneration--Repair, regrowth, or restoration of a part

H. Cutaneous--Pertaining to the skin

I. Ambulatory--Able to walk

J. Anus--Opening of the rectum

K. Axilla--Area under arm; armpit

L. Buttocks--Prominence of gluteal muscles on the posterior part of the body at the hipline

M. Contracture--Shortening or tightening of a muscle due to spasm, paralysis, or disease

N. Decubitus ulcer--Lesion, usually over a bony prominence, due to local interference of circulation

O. Denture--Complement of teeth, either natural or artificial; artificial replacement of one or more teeth, especially a set of false teeth

P. Excoriation--Removal of areas of skin by trauma, scraping, or scratching

Q. Genitalia--Organs of the reproductive system, especially the external organs

R. Incontinence--Inability to retain urine or feces through loss of sphincter control

S. Sitz tub--Basin in which the patient sits, immersing only the hips and buttocks

(NOTE: A sitz bath is usually given for treatment of conditions affecting the lower body.)

INFORMATION SHEET

T. Sphincter--Circular muscle surrounding and closing an opening

U. Tepid--Moderately warm or lukewarm

V. Trauma--Wound or injury, especially that caused by external force

W. Umbilicus--Small depression on the abdomen marking the former attachment of the umbilical cord to the fetus

X. Hygiene--Study of health and observance of health rules

Y. Sordes--Brown crusts which accumulate on the teeth and about the lips from foul stomach or secretions of the mouth

Z. Tactile--Perceptible by touch

AA. Integrity--An unimpaired condition

II. Layers of the skin

A. Epidermis

1. Covers outer area of the body

(NOTE: There are approximately 3,000 square inches of surface on the average adult.)

2. Consists of squamous epithelial cells

(NOTE: Epidermis is thickest on the palms and soles.)

3. Inner layer forms new cells

(NOTE: Skin can be regenerated only as long as the inner layer remains intact.)

4. Contains the pigment or melanin

B. Dermis

1. Lies directly below the epidermis

(NOTE: The dermis is referred to as the *true skin.*)

2. Acts as connective tissue framework

3. Contains blood vessels, nerves, lymph vessels, hair follicles, and sweat glands

C. Subcutaneous or superficial fascia

1. Consists of elastic and fibrous tissues and deposits of fat

2. Attaches the dermis to the underlying structures

INFORMATION SHEET

III. Appendages of the skin and their functions

   A. Hair--Keeps body warm

   B. Nails--Horny, cutaneous plates that protect delicate tissues

   C. Sebaceous glands--Secrete oil to lubricate and soften tissue

   D. Sudoriferous or sweat glands--Secrete body salts, waste products, and water

   E. Ceruminous glands in ears--Secrete wax

IV. Parts of the skin (Transparency 1)

   A. Epidermis

   B. Dermis (corium)

   C. Subcutaneous tissue (fascia)

   D. Sudoriferous (sweat) gland

   E. Sebaceous (oil) gland

   F. Hair follicle

   G. Cutaneous nerve endings

   H. Pore (sweat duct opening)

   I. Growing layer

   J. Blood vessel

   K. Fibrous, connective tissue

   L. Adipose (fat) cells

V. Functions of the skin

   A. Sensation

      1. Basic sensations are pain, temperature, touch, and pressure

      2. Permits body to adjust to environmental changes

   B. Protection

      1. Forms an elastic covering for protection against the external environment

INFORMATION SHEET

2. Prevents excessive loss of fluids and electrolytes
3. Prevents invasion of microorganisms
4. Repels water

C. Regulation of body temperature

1. Evaporation of perspiration cools the skin
2. Adjustment of size of blood vessels increases or decreases heat loss
3. Fatty tissue acts as insulation to prevent heat loss

D. Excretion of substances on a limited basis

1. Excretes water through pores
2. Releases salt through skin
3. Eliminates waste products through integumentary system

E. Formation of vitamins--Forms vitamin D when exposed to sun or ultraviolet light

F. Maintenance of skin surface

1. Secretes oil to maintain elasticity
2. Provides a water-resistant base

VI. Characteristics of healthy skin (Assignment Sheet #1)

A. Smooth texture

B. Good elasticity

C. Consistency of color

(NOTE: Color may be hard to determine because each individual has a certain amount of pigment in his or her skin. Different races have unique characteristics of color. Skin color should be carefully considered when assessing condition. Try to use natural light rather than fluorescent or artificial light when looking at the skin.)

D. No abnormal odor

(NOTE: The skin will have an odor in certain conditions. Healthy skin should not have a distinguishable odor.)

E. Hydrated quality

(NOTE: Skin should not be dry or flaky.)

INFORMATION SHEET

VII. Changes in the skin that take place during the aging process

A. Becomes drier and is prone to wrinkling

B. May become thin and translucent

C. Is very susceptible to any irritations; bruises easily

VIII. Steps to follow when assessing the condition of the skin

A. Make sure you have as natural a light source as possible

B. Observe the overall picture of the skin

(NOTE: The best time to observe the skin is when you are bathing the patient. Not only can you observe the color, but you may assess the texture, contour, and quality.)

C. Observe the skin and mucous membranes for changes or abnormalities in color, swelling, or signs that patient has been scratching, rubbing, or picking at the skin

D. Touch the skin to check the temperature, texture, and secretions

E. Note any abnormal odors of the skin

IX. Abnormalities of the skin and their descriptions

A. Jaundice--Yellowish pigment found on the skin and the sclera (white portion of the eye)

B. Pallor--Paleness of skin, best assessed in nail beds, lips, and conjunctiva (lining of the eyelid)

(NOTE: Paleness might be natural in a person's coloring. If so, the skin should look healthy and translucent, and the mucous membranes and nail beds should look pink.)

C. Cyanosis--Bluish-gray color that is best seen in the skin around the lips, cheeks, and ear lobes

(NOTE: Be sure to notice the distribution of the cyanosis, as in some areas it may be a symptom of a certain disease or disorder.)

D. Mottling--Condition of spotting with patches of color

E. Edema--Swelling caused from retention of fluid in tissues that can be seen and felt in the tissue area

F. Erythema--Form of a rash showing redness over the skin

INFORMATION SHEET

G. Ecchymoses (bruises)--Hemorrhagic areas under the skin which may appear in small areas (petechiae) or in larger areas

(NOTE: The age of the ecchymosis may be seen by the color change. The reddish-blue area will change to greenish-brown, then yellow as it heals.)

X. Factors that may cause a patient to develop decubiti

A. Incontinence

B. Immobility

C. Malnutrition

D. Poor circulation

XI. Methods to prevent decubiti (Job Sheet #11)

A. Keep patient dry

B. Turn patient frequently to prevent continued pressure on bony prominences

C. Make sure patient has well-balanced, high protein diet

D. Massage gently areas that have poor circulation

XII. Purposes of daily body care (Job Sheets #1, #2, #3, #4, #5, #6, and #7)

A. Cleanse, refresh, and soothe the patient

B. Stimulate circulation

C. Improve elimination

D. Relax muscles

E. Prevent contractures with planned exercises

F. Observe patient's physical and mental status

G. Relieve restlessness

H. Observe patient's skin for pressure areas, bruises, excoriations, rashes, or other lesions

INFORMATION SHEET

XIII. Routine morning care procedures (Job Sheets #8, #9, and #10)

(NOTE: These procedures may vary from patient to patient, depending on his or her needs. The nursing care plan will provide a guideline on care to be given.)

A. Bath

(NOTE: The type of bath given will depend upon the patient's physical and mental condition.)

B. Oral hygiene

(NOTE: Whenever possible, the patient will help with oral hygiene or take care of it alone. Helpless or unconscious patients need mouth care as often or more often than those who can assist in their own care.)

C. Care of fingernails and toenails

D. Care of hair and scalp

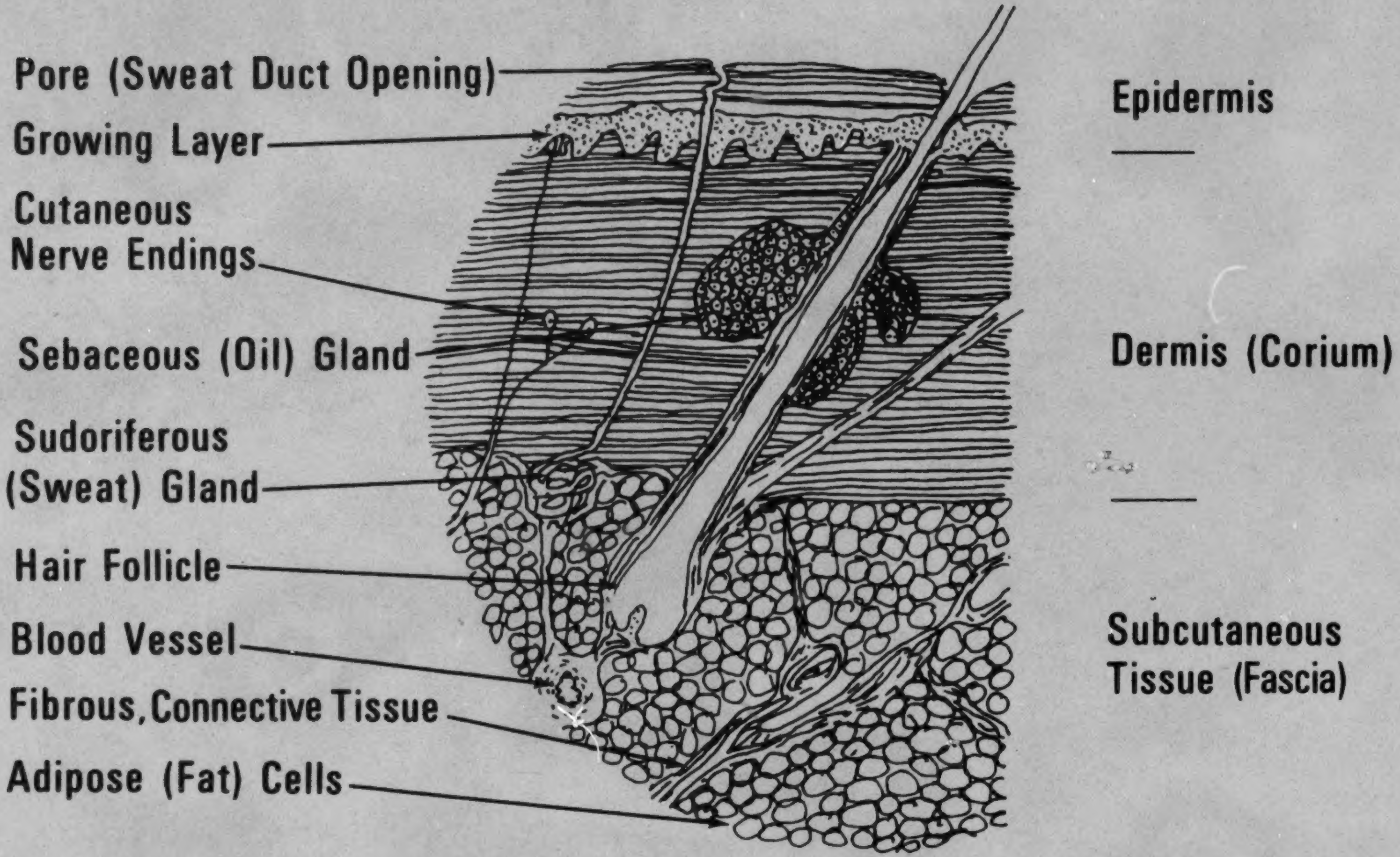
E. Shaving the patient

F. Back rub

G. Bedmaking

H. Positioning and/or exercise, as ordered or required

The Skin



Pore (Sweat Duct Opening)
Growing Layer
Cutaneous Nerve Endings
Sebaceous (Oil) Gland
Sudoriferous (Sweat) Gland
Hair Follicle
Blood Vessel
Fibrous, Connective Tissue
Adipose (Fat) Cells
Epidermis
Dermis (Corium)
Subcutaneous Tissue (Fascia)

THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

ASSIGNMENT SHEET #1--ASSESS CONDITION OF THE SKIN

NAME________________________________ SCORE______________

As a nurse it is important that you be able to observe your patients' conditions. You must be able to distinguish the normal from the abnormal. It takes much practice and many observations to make an accurate assessment of the patient's condition. Not only do you need to recognize problems before they become worse, but to be able to write the information down accurately. Select a classmate to work with you. Observe the condition of his or her skin. Remember the information gained in this unit to help you in the process. After you have examined the skin carefully, write down what you have seen in descriptive terms. Discuss your findings and the manner in which you have described them in class.

Examples: Color: Pale and translucent; feet and hands appear somewhat cyanotic

Texture: Smooth without wrinkles; some lesions noted on forehead and nose; appears dry and flaky on lower extremities

Temperature: Cool to the touch

Elasticity: Good elasticity; responds quickly to grasping upper arm and letting go

Smell: No distinctive odor

Color: ____

____

Texture: ____

____

Temperature: ____

____

Elasticity: ____

____

Smell: ____

____

Any other observable signs or symptoms: ____________________________

____

____

THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

JOB SHEET #1--ASSIST WITH A TUB BATH OR SHOWER

(NOTE: Patients who are able to ambulate and are able to care for themselves with little or no assistance usually may take tub baths and/or showers. Be sure to check with the nursing care plan to see if this is permitted before you assist your patient.)

I. Equipment needed

- A. Face towel
- B. Two bath towels
- C. Washcloth
- D. Dish with soap
- E. Nonskid bath mat
- F. Bath mat
- G. Bath blanket or cover
- H. Gown, robe, slippers, and shower cap, if needed
- I. Bath thermometer
- J. Lotion and deodorant
- K. Chair or stool
- L. Sign for bathroom door

II. Procedure

- A. Prepare bathroom and assemble equipment
  1. Have bathroom warm, but well-ventilated for comfort and safety
  2. Clean bathtub or shower thoroughly
  3. Place nonskid bathmat in tub or shower
  4. Fill tub approximately half full of water 95°-105°F (35°-39.3°C) or adjust shower water flow

     (NOTE: If no bath thermometer is available, test water temperature with elbow; water should be tepid.)
  5. Place bathmat on floor beside tub or shower
  6. Place sign on bathroom door

JOB SHEET #1

B. Prepare patient

  1. Escort patient to bathroom
  2. Explain communication device
  3. Help patient undress, if necessary
  4. Instruct patient to leave bathroom door unlocked

C. Assist patient with bath or shower

  1. Assist patient into tub or shower
  2. Wash back and/or assist, as needed
  3. Observe patient for any unusual symptoms

     (NOTE: Check patient frequently if left in bathroom alone. Patient's bed could be made at this time if it is close to the bathroom.)

  4. Do not leave patient in tub or shower longer than 8 to 10 minutes without doctor's permission

D. Place opened bath blanket on chair or stool beside tub

E. Allow water to run out of tub or shut off shower water flow

F. Assist patient out of tub or shower

  1. Seat patient on stool; wrap bath blanket around lower part of body
  2. Dry skin by brisk use of towel or firm patting motion if patient's skin is dehydrated, loose, and dry

G. Help patient dress

  1. Help patient into fresh, dry clothing
  2. Return patient to unit and help into clean bed

H. Check bathroom

  1. Place towels, washcloth, and bathmat in hamper
  2. Clean tub or shower thoroughly
  3. Ventilate room
  4. Leave bathroom tidy
  5. Remove sign from door

JOB SHEET #1

I. Care for patient's environment
   1. Leave all desired articles within reach of patient
   2. Place communication device within convenient reach of patient
   3. Place clean towels and washcloth in bedside table
   4. Damp dust patient's unit
   5. Place waste receptacle conveniently

J. Wash hands

K. Report observations to supervisor

L. Report and record care and observations

JOB SHEET #1

III. Checklist for assisting with a tub bath or shower

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ______________________________

____

____

B. Had bathroom warm, but well-ventilated for comfort and safety	☐	☐

Comments: ______________________________

____

____

C. Cleaned bathtub or shower thoroughly	☐	☐

Comments: ______________________________

____

____

D. Placed nonskid bathmat in tub or shower	☐	☐

Comments: ______________________________

____

____

E. Filled tub approximately half full of water 95°-105°F (35°-39.3°C) or adjusted shower water flow	☐	☐

Comments: ______________________________

____

____

JOB SHEET #1

		Performed well	Needs improvement
F.	Placed bathmat on floor beside tub or shower	☐	☐
	Comments: ____________		
G.	Placed sign on bathroom door	☐	☐
	Comments: ____________		
H.	Escorted patient to bathroom	☐	☐
	Comments: ____________		
I.	Explained communication device	☐	☐
	Comments: ____________		
J.	Helped patient undress, if necessary	☐	☐
	Comments: ____________		

JOB SHEET #1

		Performed well	Needs improvement
K.	Instructed patient to leave bathroom door unlocked	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
L.	Assisted patient into tub or shower	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
M.	Washed back and/or assisted, as needed	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
N.	Observed patient for any unusual symptoms	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
O.	Did not leave patient in tub or shower longer than eight-10 minutes without doctor's permission	☐	☐

Comments: ____________________

____

____

JOB SHEET #1

	Performed well	Needs improvement
P. Placed opened bath blanket on chair or stool beside tub	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
Q. Allowed water to run out of tub or shut off shower water flow	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
R. Seated patient on stool; wrapped bath blanket around lower part of body	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
S. Dried skin by brisk use of towel or firm patting motion if patient's skin was dehydrated, loose, and dry	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
T. Helped patient into fresh, dry clothing	☐	☐

Comments: ____________________

____

____

JOB SHEET #1

	Performed well	Needs improvement
U. Returned patient to unit and helped into clean bed	☐	☐
Comments: ______________________________		
V. Placed towels, washcloth, and bathmat in hamper	☐	☐
Comments: ______________________________		
W. Cleaned tub or shower thoroughly	☐	☐
Comments: ______________________________		
X. Ventilated room	☐	☐
Comments: ______________________________		
Y. Left bathroom tidy	☐	☐
Comments: ______________________________		

JOB SHEET #1

	Performed well	Needs improvement
Z. Removed sign from door	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
AA. Left all desired articles within reach of patient	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
BB. Placed communication device within convenient reach of patient	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
CC. Placed clean towels and washcloths in bedside table	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
DD. Damp dusted patient's unit	☐	☐
Comments: ______________________________ ______________________________ ______________________________		

JOB SHEET #1

	Performed well	Needs improvement
EE. Placed waste receptacle conveniently	☐	☐
Comments: ______________________		
FF. Washed hands	☐	☐
Comments: ______________________		
GG. Reported observations to supervisor	☐	☐
Comments: ______________________		
HH. Reported and recorded care and observations	☐	☐
Comments: ______________________		

THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

JOB SHEET #2--ASSIST WITH A SITZ BATH

I. Equipment needed

   A. Portable sitz chair, disposable sitz bath, sitz tub, or bathtub (See Figures 1 and 2)

FIGURE 1

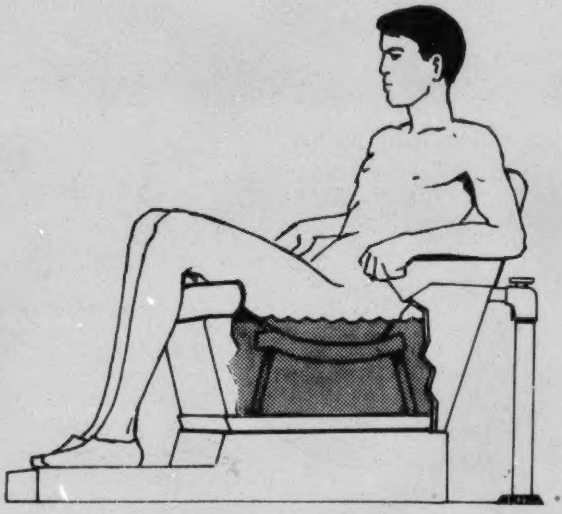
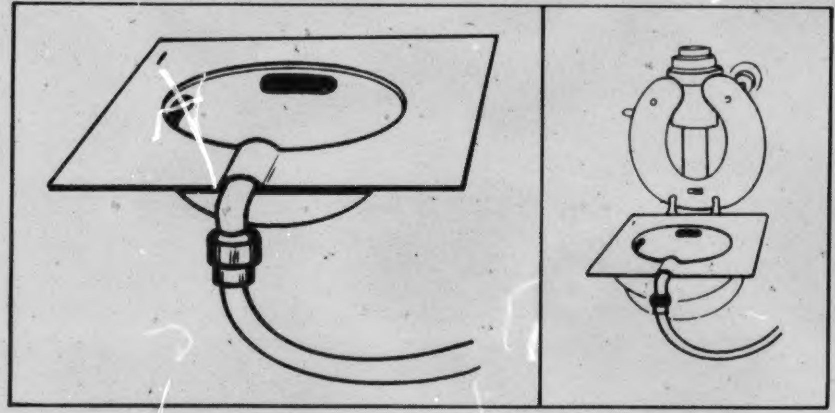


FIGURE 2



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JOB SHEET #2

B. Small blanket

C. Bath towels

D. Large pitcher

E. Bath thermometer

II. Procedure

A. Prepare bathroom and solution

1. Prevent drafts by closing windows in room
2. Fill sitz bath with water
3. Check to see that temperature of water is approximately 105°-110°F (40°-43°C)
4. Place towel in tub for patient to sit on

B. Identify patient and explain procedure

C. Assist patient into sitz chair or tub

(NOTE: If disposable sitz bath is used, seat patient on commode into which sitz bath is placed.)

1. Regulate flow of solution from suspended reservoir
2. Refill reservoir as needed

D. Place towel over thighs; drape bath blanket about patient if chilly

E. Continue treatment for specified time, usually 15-20 minutes

F. Stay with patient during treatment

(CAUTION: Observe patient closely; the effect of heat on a relatively large portion of the body may cause weakness or vertigo.)

G. Assist patient from sitz chair or tub

H. Dry and assist patient in dressing and returning to bed

I. Provide for patient's comfort; place communication device conveniently

J. Clean bath area

K. Wash hands

L. Report and record duration of treatment and observations

JOB SHEET #2

III. Checklist for assisting with a sitz bath

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments:		
B.	To prepare bathroom and solution, prevented drafts by closing windows in room	☐	☐
	Comments:		
C.	Filled sitz bath with water	☐	☐
	Comments:		
D.	Checked to see that temperature of water was approximately 105°-110°F (40°-43°C)	☐	☐
	Comments:		
E.	Placed towel in tub for patient to sit on	☐	☐
	Comments:		

JOB SHEET #2

	Performed well	Needs improvement
F. Identified patient and explained procedure	☐	☐

Comments:

G. Assisted patient into sitz chair or tub; regulated flow of solution from suspended reservoir	☐	☐

Comments:

H. Refilled reservoir as needed	☐	☐

Comments:

I. Placed towel over thighs; draped bath blanket about patient if chilly	☐	☐

Comments:

J. Continued treatment for specified time, usually 15-20 minutes	☐	☐

Comments:

JOB SHEET #2

		Performed well	Needs improvement
K.	Stayed with patient during treatment	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
L.	Assisted patient from sitz chair or tub	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
M.	Dried and assisted patient in dressing and returning to bed	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
N.	Provided for patient's comfort; placed communication device conveniently	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
O.	Cleaned bath area	☐	☐

Comments: ______________________________

____

____

JOB SHEET #2

		Performed well	Needs improvement
P.	Washed hands	☐	☐
	Comments:		
Q.	Reported and recorded duration of treatment and observations	☐	☐
	Comments:		

THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

JOB SHEET #3--ASSIST WITH OR GIVE A PARTIAL OR SELF-HELP BATH

(NOTE: Patients who are having difficulty in moving due to their condition may need some assistance in bathing. They may be able to bathe only certain areas and require your assistance in completing the bath. Be sure to check the nursing care plan to see if your patient will need this type of bath.)

I. Equipment needed

  A. Basin with warm water between 105°-115°F (39.3°-46.1°C)

  B. Equipment for mouth care

  C. Toilet articles, including appropriate shaving equipment

  D. Lotion

  E. Soap and soap dish

  F. Washcloth and towel

  G. Bath blanket or cover

  H. Linen for bed change

  I. Linen receptacle

  J. Damp cloth

  K. Waste receptacle

  L. Sign for door

II. Procedure

  A. Check room temperature

  (NOTE: Temperature should be 75°- 80°F [23.9°-26.7°C] and room should be free of drafts.)

  B. Put sign on door of patient's room

  C. Identify patient and explain procedure

  D. Provide privacy

  E. Wash hands

  F. Offer bedpan or urinal

JOB SHEET #3

G. Wash hands

H. Assemble equipment and take to bedside

I. Remove top bedding and replace with bath blanket; remove patient's gown

J. Give patient ample time to bathe

K. Bathe legs if patient is unable to do so

L. Obtain clean water; wash back and buttocks

M. Give back rub

N. Assist patient in dressing and grooming

(NOTE: If permitted, assist patient to sit in chair while bed is being made.)

O. Care for patient's environment

1. Change bed linens
2. Leave all desired articles within reach of patient
3. Place communication device within convenient reach of patient
4. Clean and dry utensils and return to bedside stand
5. Replenish towels and washcloth
6. Place waste receptacle conveniently
7. Damp dust patient's unit
8. Remove sign from door

P. Wash hands

Q. Report and record care and observations

JOB SHEET #3

III. Checklist for assisting with or giving a partial or self-help bath

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ______________________________		
B.	Checked room temperature	☐	☐
	Comments: ______________________________		
C.	Put sign on door of patient's room	☐	☐
	Comments: ______________________________		
D.	Identified patient and explained procedure	☐	☐
	Comments: ______________________________		
E.	Provided privacy	☐	☐
	Comments: ______________________________		

JOB SHEET #3

		Performed well	Needs improvement
F.	Washed hands	☐	☐
	Comments: ____________________		
G.	Offered bedpan or urinal	☐	☐
	Comments: ____________________		
H.	Washed hands	☐	☐
	Comments: ____________________		
I.	Assembled equipment and took to bedside	☐	☐
	Comments: ____________________		
J.	Removed top bedding and replaced with bath blanket; removed patient's gown	☐	☐
	Comments: ____________________		

PN I - 535-C

JOB SHEET #3

	Performed well	Needs improvement
K. Gave patient ample time to bathe	☐	☐

Comments: ______________________________

____

____

L. Bathed legs if patient was unable to do so	☐	☐

Comments: ______________________________

____

____

M. Obtained clean water; washed back and buttocks	☐	☐

Comments: ______________________________

____

____

N. Gave back rub	☐	☐

Comments: ______________________________

____

____

O. Assisted patient in dressing and grooming	☐	☐

Comments: ______________________________

____

____

JOB SHEET #3

		Performed well	Needs improvement
P.	Changed bed linens	☐	☐
	Comments: ____________________		
Q.	Left all desired articles within reach of patient	☐	☐
	Comments: ____________________		
R.	Placed communication device within convenient reach of patient	☐	☐
	Comments: ____________________		
S.	Cleaned and dried utensils and returned to bedside stand	☐	☐
	Comments: ____________________		
T.	Replenished towels and washcloth	☐	☐
	Comments: ____________________		

JOB SHEET #3

		Performed well	Needs improvement
U.	Placed waste receptacle conveniently	☐	☐
	Comments: ______________________		
V.	Damp dusted patient's unit	☐	☐
	Comments: ______________________		
W.	Removed sign from door	☐	☐
	Comments: ______________________		
X.	Washed hands	☐	☐
	Comments: ______________________		
Y.	Reported and recorded care and observations	☐	☐
	Comments: ______________________		

THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

JOB SHEET #4--GIVE A COMPLETE BED BATH

(NOTE: The patient who is unable to do any part of his or her bath will require that you complete all of the bathing procedure. Check the nursing care plan to see if your patient will require this type of bath and plan time in your schedule for giving this patient complete care.)

I. Equipment needed

   A. Bed linen
   B. Bath blanket or cover
   C. Bath basin with water 105°-115°F (39.3°-46.1°C)
   D. Soap and soap dish
   E. Washcloth
   F. Face towel
   G. Bath towel
   H. Gown
   I. Lotion
   J. Equipment for mouth care
   K. Equipment for nail care
   L. Brush and comb
   M. Linen receptacle
   N. Damp cloth
   O. Waste receptacle
   P. Sign for door

II. Procedure

   A. Check room temperature

   (NOTE: Temperature should be 75°-80°F [23.9°-26.7°C] and room should be free of drafts.)

   B. Put sign on door of patient's room
   C. Identify patient and explain procedure

JOB SHEET #4

D. Provide privacy

E. Offer bedpan or urinal

F. Wash hands

G. Assemble equipment needed and take to bedside; arrange linen in order of use

H. Assist with mouth care, assist with shaving as needed

I. Lower backrest and side rails; if two pillows are being used, remove one

J. Loosen top bedding; remove spread and blanket; fold and place them on back of chair

K. Place bath blanket over top sheet; have patient hold on to top edge while sheet is fanfolded to end of bed and removed

L. Fold sheet and place on back of chair

M. Remove patient's gown or pajamas; have patient move to side of bed toward you

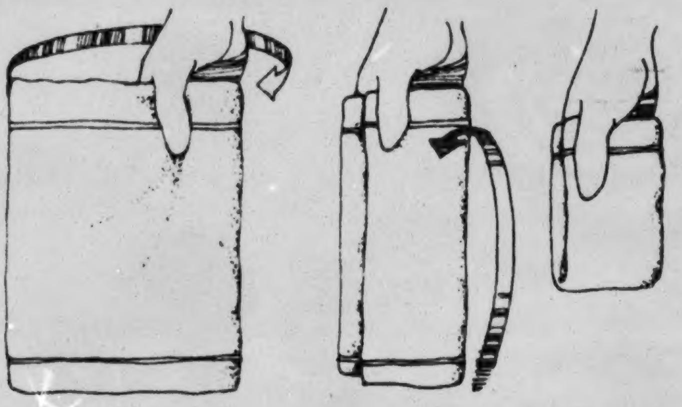
N. Give bath

1. Face, neck, and ears

   a. Place face towel across upper edge of bath blanket

   b. Fold washcloth around hand to form a mitten (Figure 1)

FIGURE 1



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JOB SHEET #4

   c. Wash eyes with washcloth, cleansing from inner corner to outside using separate part of cloth for each eye; dry with towel

      (NOTE: Do not use a soapy cloth.)

   d. Wash face, neck, and ears; rinse and dry with face towel

      (NOTE: Have patient wash face, neck, and ears if condition permits.)

2. Arms

   a. Expose only one arm at a time; place bath towel under arm farthest from you

   b. Wash arm with soapy washcloth; rinse and dry, giving special care to axilla

   c. Repeat procedure on other arm

   d. Have patient place hands in bath basin and wash and dry them well

   e. Clean and file nails, if necessary

3. Chest and abdomen

   a. Place bath towel across chest

   b. Fold bath blanket to waist; wash chest and breasts under towel, rinse, and dry well

      (NOTE: Pay special attention to women with pendulous breasts.)

   c. Turn bath towel lengthwise to cover chest and abdomen; fold blanket to pubic area; wash, rinse, and dry abdomen

   d. Replace bath towel with bath blanket

4. Legs

   a. Drape patient with bath blanket exposing lower leg and thigh farthest from you

      (NOTE: Do not reach across a clean area.)

   b. Place bath towel lengthwise under leg

   c. Wash, rinse, and dry leg

   d. Place basin on towel and put patient's foot in basin; wash well between toes and dry thoroughly

   e. Repeat procedure on other leg, thigh, and foot

JOB SHEET #4

5. Change water

6. Back

    a. Turn patient on side or abdomen

    b. Fold blanket so that back and buttocks are exposed

    c. Place bath towel on bed along patient's back

    d. Bathe, rinse, and dry back

    e. Bathe, rinse, and dry buttocks

    f. Rub back with lotion, giving special care to reddened areas over bony prominences

7. Completing bath

    a. Instruct patient to wash genital area

    b. Place basin within reach of patient

    (NOTE: If patient is unable to finish bath, health assistant will wash genital area.)

O. Assist patient in dressing and grooming

1. Put on clean gown or pajamas

2. Place a hand towel over pillows and comb hair for helpless patient

3. Assist patient as needed with cosmetics

P. Care for patient's environment

1. Empty bath basin; clean and return all bathing equipment to bedside stand

2. Change bed linens

3. Replace clean towels and washcloth

4. Place communication device and bedside stand within reach of patient

JOB SHEET #4

5. Place waste receptacle conveniently
6. Damp dust overbed, table, and bedside cabinet
7. Discard soiled linen
8. Remove sign from door

Q. Wash hands

R. Report and record care and observations

JOB SHEET #4

III. Checklist for giving a complete bed bath

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
B. Checked room temperature	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
C. Put sign on door of patient's room	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
D. Identified patient and explained procedure	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
E. Provided privacy	☐	☐

Comments: ____________________

____

____

JOB SHEET #4

		Performed well	Needs improvement
F.	Offered bedpan or urinal	☐	☐
	Comments: ____________________		
G.	Washed hands	☐	☐
	Comments: ____________________		
H.	Assembled equipment needed and took to bedside; arranged linen in order of use	☐	☐
	Comments: ____________________		
I.	Assisted with mouth care; assisted with shaving as needed	☐	☐
	Comments: ____________________		
J.	Lowered backrest and side rails; if two pillows were being used, removed one	☐	☐
	Comments: ____________________		

JOB SHEET #4

	Performed well	Needs improvement
K. Loosened top bedding; removed spread and blanket; folded and placed them on back of chair	☐	☐
Comments: ______________________________		
L. Placed bath blanket over top sheet; had patient hold on to top edge while sheet was fanfolded to end of bed and removed	☐	☐
Comments: ______________________________		
M. Folded sheet and placed on back of chair	☐	☐
Comments: ______________________________		
N. Removed patient's gown or pajamas; had patient move to side of bed toward student	☐	☐
Comments: ______________________________		
O. To bathe face; neck, and ears, placed face towel across upper edge of bath blanket	☐	☐
Comments: ______________________________		

JOB SHEET #4

		Performed well	Needs improvement
P.	Folded washcloth around hand to form a mitten	☐	☐

Comments: ______________________________

____

____

Q.	Washed eyes with washcloth, cleansed from inner corner to outside using separate part of cloth for each eye; dried with towel	☐	☐

Comments: ______________________________

____

____

R.	Washed face, neck, and ears; rinsed and dried with face towel	☐	☐

Comments: ______________________________

____

____

S.	To bathe arms, exposed only one arm at a time; placed bath towel under arm farthest from student	☐	☐

Comments: ______________________________

____

____

T.	Washed arm with soapy washcloth; rinsed and dried, giving special care to axilla	☐	☐

Comments: ______________________________

____

____

JOB SHEET #4

		Performed well	Needs improvement
U.	Repeated procedure on other arm	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
V.	Had patient place hands in bath basin and washed and dried them well	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
W.	Cleaned and filed nails, if necessary	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
X.	To bathe chest and abdomen, placed bath towel across chest	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
Y.	Folded bath blanket to waist; washed chest and breasts under towel, rinsed and dried well	☐	☐

Comments: ______________________________

____

____

JOB SHEET #4

	Performed well	Needs improvement
Z. Turned bath towel lengthwise to cover chest and abdomen; folded blanket to pubic area; washed, rinsed, and dried abdomen	☐	☐
Comments: ____________________		
AA. Replaced bath towel with bath blanket	☐	☐
Comments: ____________________		
BB. To bathe legs, draped patient with bath blanket, exposing lower leg and thigh farthest from student	☐	☐
Comments: ____________________		
CC. Placed bath towel lengthwise under leg	☐	☐
Comments: ____________________		
DD. Washed, rinsed, and dried leg	☐	☐
Comments: ____________________		

JOB SHEET #4

	Performed well	Needs improvement
EE. Placed basin on towel and put patient's foot in basin; washed well between toes and dried thoroughly	☐	☐
Comments:		
FF. Repeated procedure on other leg, thigh, and foot; changed water	☐	☐
Comments:		
GG. To bathe back, turned patient on side or abdomen	☐	☐
Comments:		
HH. Folded blanket so that back and buttocks were exposed	☐	☐
Comments:		
II. Placed bath towel on bed along patient's back	☐	☐
Comments:		

JOB SHEET #4

	Performed well	Needs improvement
JJ. Bathed, rinsed, and dried back	☐	☐
Comments: ______________________________		
KK. Bathed, rinsed, and dried buttocks	☐	☐
Comments: ______________________________		
LL. Rubbed back with lotion, giving special care to reddened areas over bony prominences	☐	☐
Comments: ______________________________		
MM. To complete bath, instructed patient to wash genital area	☐	☐
Comments: ______________________________		
NN. Placed basin within reach of patient	☐	☐
Comments: ______________________________		

JOB SHEET #4

	Performed well	Needs improvement
OO. Assisted patient to put on clean gown or pajamas	☐	☐
Comments: ______________________________		
PP. Placed a hand towel over pillows and combed hair for helpless patient	☐	☐
Comments: ______________________________		
QQ. Assisted patient as needed with cosmetics	☐	☐
Comments: ______________________________		
RR. Emptied bath basin; cleaned and returned all bathing equipment to bedside stand	☐	☐
Comments: ______________________________		
SS. Changed bed linens; replaced clean towels and washcloth	☐	☐
Comments: ______________________________		

JOB SHEET #4

	Performed well	Needs improvement
TT. Placed communication device and bedside stand within reach of patient	☐	☐
Comments: ____ ____ ____		
UU. Placed waste receptacle conveniently	☐	☐
Comments: ____ ____ ____		
VV. Damp dusted overbed, table, and bedside cabinet	☐	☐
Comments: ____ ____ ____		
WW. Discarded soiled linens; removed sign from door	☐	☐
Comments: ____ ____ ____		
XX. Washed hands	☐	☐
Comments: ____ ____ ____		

JOB SHEET #4

	Performed well	Needs improvement
YY. Reported and recorded care and observations	☐	☐

Comments: ______________________________

____

____

INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

JOB SHEET #5--APPLY ANTI-EMBOLISM STOCKINGS

Anti-embolism stockings are used to prevent venous congestion and to promote circulation. A good time to remove the stockings and reapply them is before the morning bath and also in the evening. Otherwise, unless indicated by the physician, the patient should wear them continuously. When measuring for stockings, follow the directions below. Launder the stockings according to the manufacturer's instructions and provide another pair while the first pair is being laundered.

I. Equipment

  A. Tape measure

  B. One pair anti-embolism stockings (correct size for individual patient's measurement)

II. Procedure for below-the-knee stockings

  A. Identify patient and explain procedure

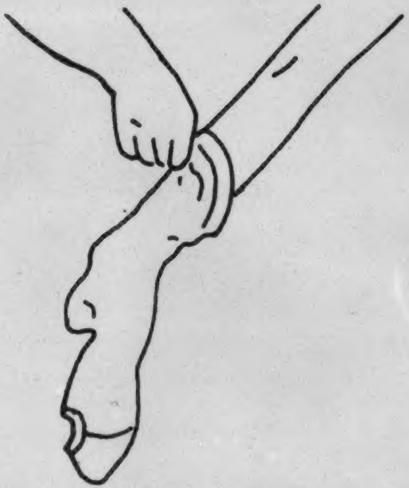
  B. Measure calf circumference

  C. Measure length from heel to bend in back of knee

  D. Obtain the correct size to fit patient's measurements

  E. Insert hand into top of stocking (Figure 1)

FIGURE 1

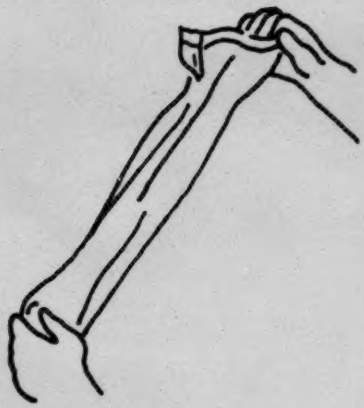


Used with permission of the Kendall Company from *In-Service Guide for the Use of T.E.D. Anti-Embolism Stockings*, Boston, Massachusetts.

JOB SHEET #5

F. Grasp heel pocket and turn stocking inside-out to the pocket (Figure 2)

FIGURE 2



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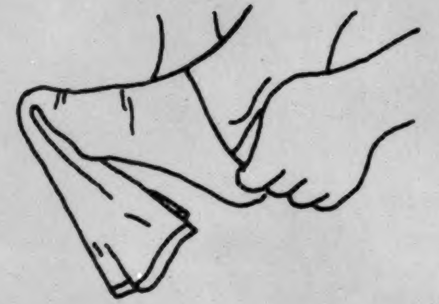
G. Stretch stocking open at the heel and fit foot and heel pocket (Figure 3)

FIGURE 3



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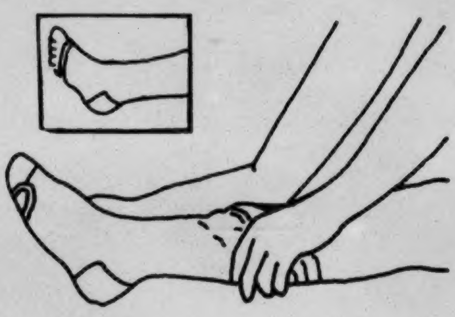
JOB SHEET #5

H. Grasp top of stocking and pull over foot gathering material at ankle (Figure 4)

FIGURE 4



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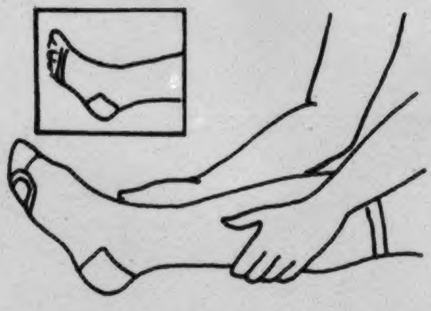
I. Begin fitting and pulling the stocking around the ankle and calf, working up to full length (Figure 5)

(**CAUTION:** For below-the-knee stockings, DO NOT cover any portion of the knee and DO NOT turn down top of stockings.)

FIGURE 5



Used with permission of the Kendall Company from *In-Service Guide for the Use of T.E.D. Anti-Embolism Stockings*, Boston, Massachusetts.

J. Make sure heel and toe fit snugly, and smooth any excess material with palms

(NOTE: If necessary, pull toe section forward to eliminate wrinkles. The slipover inspection toe allows for observation of area without removing the stocking.)

JOB SHEET #5

III. Procedure for thigh-length stockings

A. Measure upper thigh circumference

(NOTE: If the measurement is over 25 in., this style should not be used.)

B. Measure calf circumference to determine size

C. Measure distance from gluteal fold to bottom of heel to determine length

D. Make sure that the gusset or v-shaped insert of the stocking is anterior and medial after you apply stocking as indicated above

JOB SHEET #5

IV. Checklist for applying anti-embolism stockings (below-the-knee)

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________________		
B. Identified patient and explained procedure	☐	☐
Comments: ______________________		
C. Measured calf circumference	☐	☐
Comments: ______________________		
D. Measured length from heel to bend in back of knee	☐	☐
Comments: ______________________		
E. Obtained the correct size to fit patient's measurements	☐	☐
Comments: ______________________		

JOB SHEET #5

Performed well — Needs improvement

F. Inserted hand into top of stocking ☐ ☐

Comments: ______________________________

____

____

G. Grasped heel pocket and turned stocking inside-out to the pocket ☐ ☐

Comments: ______________________________

____

____

H. Stretched stocking open at the heel and fit foot and heel pocket ☐ ☐

Comments: ______________________________

____

____

I. Grasped top of stocking and pulled over foot, gathering material at ankle ☐ ☐

Comments: ______________________________

____

____

J. Began fitting and pulling the stocking around the ankle and calf, working up to full length ☐ ☐

Comments: ______________________________

____

____

JOB SHEET #5

	Performed well	Needs improvement
K. Made sure heel and toe fit snugly, and smoothed any excess material with palms	☐	☐

Comments:

V. Checklist for applying anti-embolism stockings (thigh-length)

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments:

	Performed well	Needs improvement
B. Measured upper thigh circumference	☐	☐

Comments:

	Performed well	Needs improvement
C. Measured calf circumference to determine size	☐	☐

Comments:

	Performed well	Needs improvement
D. Measured distance from gluteal fold to bottom of heel to determine length	☐	☐

Comments:

JOB SHEET #5

		Performed well	Needs improvement
E.	Made sure that the gusset or v-shaped insert of the stocking was anterior and medial after applied as indicated	☐	☐

Comments: ______________________________

THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

JOB SHEET #6--GIVE RANGE-OF-MOTION EXERCISES (ACTIVE AND PASSIVE)

(NOTE: The patient who must spend a great deal of time in bed should keep muscles toned and joints flexible. Exercise increases circulation and can help prevent congestion of fluids in the body. One of the best times for the patient to exercise is during and after the bath. The body is more relaxed and exercise can occur during the bath. Active range-of-motion exercises are done by the patient with some instructions from the nurse. Passive range-of-motion must be done for the patient by the nurse. Done routinely this procedure can prevent contractures.)

I. Procedure for active range-of-motion exercises

   A. Exercising upper extremities

      1. Neck

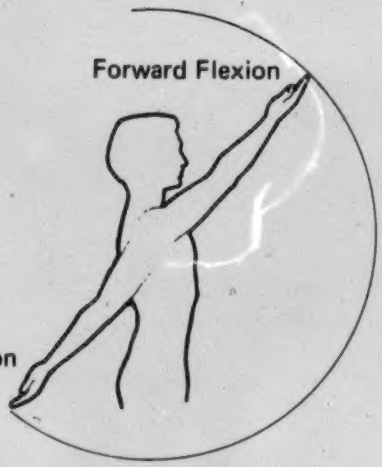
         a. Bend head and neck forward until chin touches chest, lift head up and bend back, and return to starting position (flexible and extension)

         b. Turn head to left and then to right (rotation)

      2. Shoulders

         a. Lift arm forward, over head, and return to side (flexion and extension) (Figure 1)

FIGURE 1



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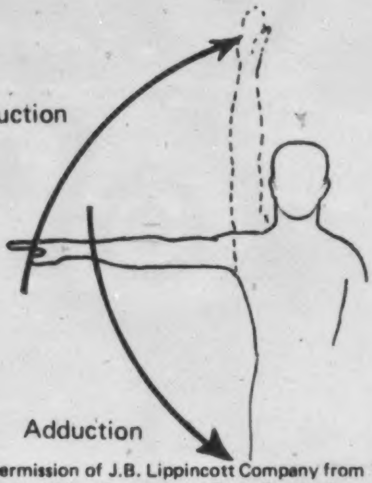
JOB SHEET #6

b. Lift arm up and out to side until it is over head; return to the side (abduction and adduction) (Figure 2)

FIGURE 2



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c. Flex elbow, bring elbow up to level of the shoulder, and reach the back of neck with fingers (external or outward rotation)

d. Flex elbow, draw arm across chest, and touch the other shoulder (internal or inward rotation)

3. Elbow--Bend elbow to touch shoulder with fingertips; straighten elbow (flexion and extension)

4. Wrist

   a. Bend palm side of hand down toward arm; then back (flexion and extension)

   b. Bend wrist from side to side

5. Fingers

   a. Bend fingers to make a fist; then straighten fingers (flexion and extension)

   b. Spread fingers fanwise; then bring together (abduction and adduction)

   c. Touch thumb into palm; then extend out straight (flexion and extension)

   d. Touch tips of each finger with thumb (opposition)

JOB SHEET #6

B. Exercising the trunk

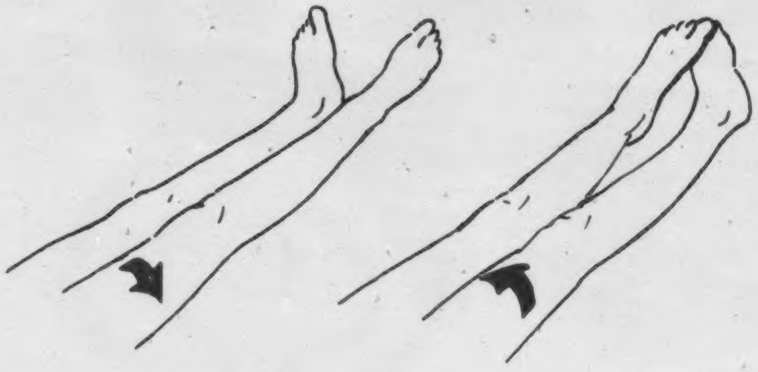
1. In dorsal recumbent position, slowly raise trunk to sitting position and return (flexion and extension)
2. In sitting position with hands behind head, bend to the left and then to the right (lateral flexion)
3. In same position, rotate upper body to the left and to the right (rotation)

C. Exercising lower extremities

(NOTE: These exercises should be done in supine or recumbent position.)

1. Hip
   a. With legs straight and toes pointing up, move leg out to side and return (abduction and adduction)
   b. Keeping knees straight, turn legs so toes point inward then outward (internal and external rotation) (Figure 3)

FIGURE 3



External Rotation

Internal Rotation

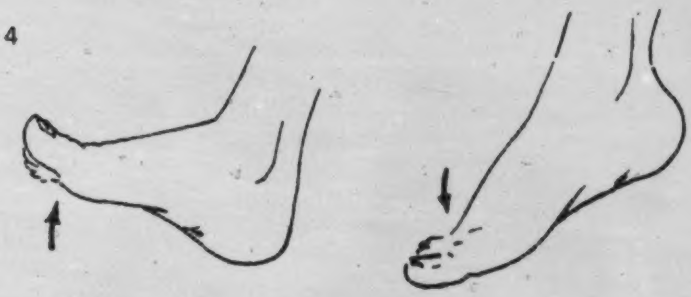
2. Knee and hip--Bend knee, bringing it as close to chest as possible; return to starting position (flexion and extension)

JOB SHEET #6

3. Ankle

   a. Bend foot up toward leg and down away from leg (dorsal flexion and plantar flexion) (Figure 4)

FIGURE 4



Dorsal Flexion Plantar Flexion

   b. Move ankle in circle (rotation)

D. Report and record procedure and observations

II. Procedure for passive range-of-motion exercises

A. Preparation

1. Adjust bed to comfortable working height with patient in supine position; move patient close to edge of bed nearest affected side

2. Replace top bedding with bath blanket or cover to avoid exposure of part of the body not being exercised

3. Use principles of proper alignment and body mechanics to avoid excessive fatigue for patient and health assistant

B. Exercising

1. Neck

   a. Supporting patient's head with your hands, flex patient's neck by bringing head forward until chin touches chest; return head to pillow

   b. Rotate the head by gently turning to one side and then the other

2. Shoulder

   a. Cup patient's elbow in right hand; grasp wrist with the left hand

   b. Move patient's arm straight up over head, keeping arm toward midline (flexion)

JOB SHEET #6

- c. Flex elbow over patient's head if space does not permit keeping elbow straight
- d. Reverse procedure, returning arm to starting position (extension)
- e. Cup patient's elbow with right hand, cradling lower arm with patient's arm close to side; use left hand to keep shoulder from elevating
- f. Keep patient's arm at bed level and move it to a 90-degree angle (abduction)
- g. Return arm to starting position (adduction)
- h. Abduct patient's arm at shoulder to 90 degrees; bend elbow to 90 degrees; support patient's wrist with your right hand and patient's elbow with your left hand; bring forearm toward the bed, palm down (internal rotation)
- i. Bring forearm toward bed, palm up, keeping shoulder and elbow at 90-degree angle throughout (external rotation)

3. Elbow
    - a. Bend elbow, with patient's arm at patient's side, palm up, moving patient's hand toward patient's shoulder (flexion)
    - b. Straighten arm (extension)
    - c. Grasp patient's hand as if to shake hands; stabilize wrist; turn patient's palm up (supination)
    - d. Turn patient's palm down (pronation)
4. Wrist
    - a. Flex patient's elbow, supporting patient's forearm with your left hand and patient's hand with your right hand
    - b. Bend the wrist forward (flexion)
    - c. Bend wrist backward (extension)
    - d. Bend patient's wrist toward little finger (abduction)
    - e. Bend patient's wrist toward patient's thumb (adduction)
5. Fingers
    - a. Support patient's wrist with left hand
    - b. Cup right hand over the back of the patient's hand

JOB SHEET #6

c. Beginning with fingertips, bend patient's hand down to form a fist (flexion)

d. Straighten fingers (extension)

e. Place patient's hand in prone position on bed

f. Move each finger away from middle finger and return (abduction and adduction)

g. Place hand in supine position, flex thumb into palm; then extend it (flexion and extension)

h. Move patient's thumb to touch tips of each finger, supporting fingers as needed; return to normal (opposition)

6. Hip and knee

   a. Place left hand under patient's knee and cup heel with right hand, stabilizing ankle

   b. Lift patient's leg and bend knee, moving patient's leg toward chest as far as possible without causing pain (flexion)

   c. Lower leg to bend (extension)

   d. Supporting knee and ankle and holding leg straight, move patient's leg resting on bed; roll entire leg inward, then outward (rotation)

7. Ankle and foot

   1. Holding ankle with one hand and foot with the other, pull toes up toward knee; then push them down (dorsal flexion and plantar flexion)

   2. Rotate ankle by holding ankle with one hand and turning foot in, then out (rotation)

C. Adjust patient's bed for comfort; replace top covers

D. Report and record procedure and observations

JOB SHEET #6

III. Checklist for giving range-of-motion exercises (active)

	Performed well	Needs improvement
A. Instructed patient and carried through exercise for neck	☐	☐
Comments: ________________________________		
B. Instructed patient and carried through exercise for shoulders	☐	☐
Comments: ________________________________		
C. Instructed patient and carried through exercises for elbow	☐	☐
Comments: ________________________________		
D. Instructed patient and carried through exercises for wrist	☐	☐
Comments: ________________________________		
E. Instructed patient and carried through exercises for fingers	☐	☐
Comments: ________________________________		

JOB SHEET #6

		Performed well	Needs improvement
F.	Instructed patient and carried through exercises for the trunk	☐	☐
	Comments: ____________________		
G.	To exercise lower extremities, instructed patient and carried through exercises for the hip	☐	☐
	Comments: ____________________		
H.	Instructed patient and carried through exercises for the knee and hip	☐	☐
	Comments: ____________________		
I.	Instructed patient and carried through exercises for the ankle	☐	☐
	Comments: ____________________		
J.	Reported and recorded procedure and observations	☐	☐
	Comments: ____________________		

JOB SHEET #6

IV. Checklist for giving range-of-motion exercises (passive)

	Performed well	Needs improvement
A. Adjusted bed to a comfortable working height with patient in supine position; moved patient close to edge of bed nearest affected side	☐	☐
Comments: ______________________________		
B. Replaced top bedding with bath blanket or cover to avoid exposure of part of the body not being exercised	☐	☐
Comments: ______________________________		
C. Used principles of proper alignment and body mechanics to avoid excessive fatigue for patient and health assistant	☐	☐
Comments: ______________________________		
D. Instructed patient and carried through exercises for the neck	☐	☐
Comments: ______________________________		

JOB SHEET #6

		Performed well	Needs improvement
E.	Instructed patient and carried through exercises for the shoulder	☐	☐
	Comments:		
F.	Instructed patient and carried through exercises for the elbow	☐	☐
	Comments:		
G.	Instructed patient and carried through exercises for the wrist	☐	☐
	Comments:		
H.	Instructed patient and carried through exercises for the fingers	☐	☐
	Comments:		
I.	Instructed patient and carried through exercises for the hip and knee	☐	☐
	Comments:		

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JOB SHEET #6

		Performed well	Needs improvement
J.	Instructed patient and carried through exercises for the ankle and foot	☐	☐

Comments: ______________________________

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		Performed well	Needs improvement
K.	Adjusted patient's bed for comfort; replaced top covers	☐	☐

Comments: ______________________________

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____

		Performed well	Needs improvement
L.	Reported and recorded procedures and observations	☐	☐

Comments: ______________________________

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THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

JOB SHEET #7--GIVE A BACK RUB

(NOTE: A back rub stimulates and promotes circulation and is relaxing for patient.)

I. Equipment needed

   A. Bath towel

   B. Lotion

   C. Washcloth

   D. Basin with warm water

   E. Soap and soap dish

II. Procedure

   A. Wash hands

   B. Assemble equipment

   C. Identify patient and explain procedure

   D. Provide privacy

   E. Assist patient

      1. Have patient turn on side or on stomach if condition permits

      2. Place bath towel close to patient's back to protect bedding

   F. Give back care

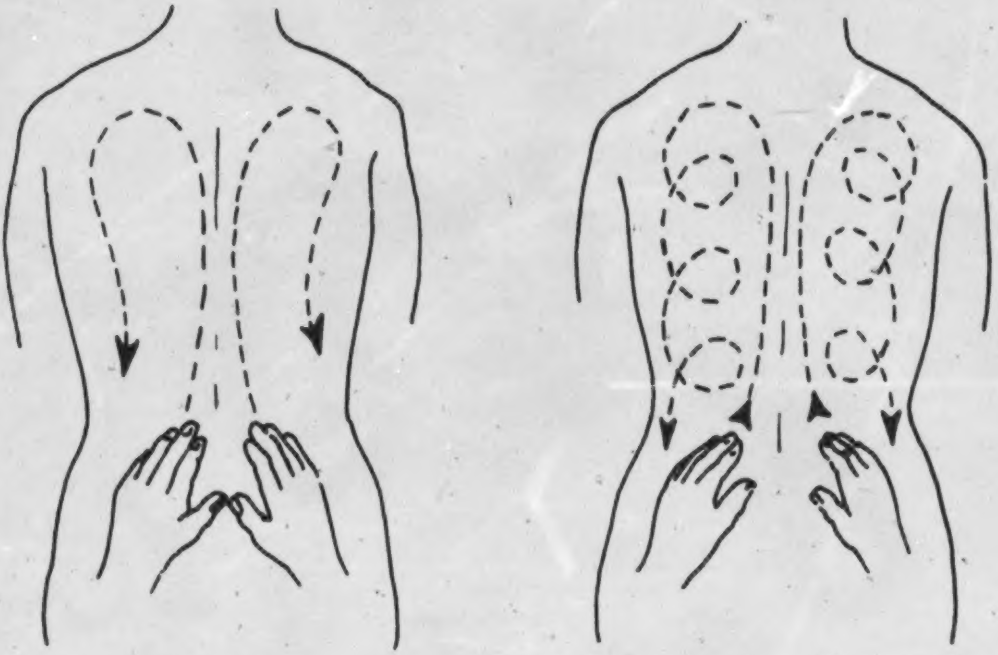
      1. Wash, rinse, and dry back

      2. Warm lotion by rubbing it in hands first or by setting lotion container in warm water

JOB SHEET #7

3. Apply lotion to entire back, beginning at lumbosacral area; apply up both sides of spinal column to neck, across shoulders, and down to lumbosacral area (Figure 1)

FIGURE 1



Long Strokes

Circular Strokes

4. Give attention to bony prominences, reddened areas, or pressure areas

G. Give after care

1. Adjust bed covers; assist patient to comfortable position

2. Remove equipment, clean, and return to proper place

H. Wash hands

I. Report and record procedure and observations

JOB SHEET #7

III. Checklist for giving a back rub

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________________		
B. Washed hands and assembled equipment	☐	☐
Comments: ______________________		
C. Identified patient and explained procedure	☐	☐
Comments: ______________________		
D. Provided privacy	☐	☐
Comments: ______________________		
E. Had patient turn on one side or on stomach if condition permitted	☐	☐
Comments: ______________________		

JOB SHEET #7

		Performed well	Needs improvement
F.	Placed bath towel close to patient's back to protect bedding	☐	☐

Comments: ____________________

____

____

G.	Washed, rinsed, and dried back	☐	☐

Comments: ____________________

____

____

H.	Warmed lotion by rubbing it in hands first or by setting lotion container in warm water	☐	☐

Comments: ____________________

____

____

I.	Applied lotion to entire back, beginning at lumbosacral area; applied up both sides of spinal column to neck, across shoulders, and down to lumbosacral area	☐	☐

Comments: ____________________

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J.	Gave attention to bony prominences, reddened areas, or pressure areas	☐	☐

Comments: ____________________

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JOB SHEET #7

		Performed well	Needs improvement
K.	Adjusted bed covers; assisted patient to comfortable position	☐	☐
	Comments: ________________________________ ________________________________ ________________________________		
L.	Removed equipment, cleaned, and returned to proper place	☐	☐
	Comments: ________________________________ ________________________________ ________________________________		
M.	Washed hands	☐	☐
	Comments: ________________________________ ________________________________ ________________________________		
N.	Reported and recorded procedures and observations	☐	☐
	Comments: ________________________________ ________________________________ ________________________________		

THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

JOB SHEET #8--ASSIST WITH ORAL HYGIENE

I. Equipment needed

  A. Toothbrush

  B. Dentifrice or toothpaste

  C. Mouthwash solution

  D. Emesis basin

  E. Mouthwash cup

  F. Drinking straw

  G. Face towel

  H. Tissues

  I. Washcloth

  J. Denture cup, if needed

II. Procedure

  A. Identify patient and explain procedure

  B. Provide privacy

  C. Wash hands

  D. Assemble equipment

  E. Prepare patient

    1. Raise head of bed, as permitted

    2. Place towel over chest to protect gown and bed covers

    3. Place needed equipment on overbed table

  F. Proceed with oral care

    1. Pour water over toothbrush, add dentifrice or toothpaste, and give toothbrush to patient for brushing

JOB SHEET #8

2. Hold emesis basin under chin

3. Have patient rinse mouth with mouthwash solution and fresh water

G. Dry patient's face; remove towel

III. Procedure for helpless or unconscious patient

A. Identify patient and explain procedure

B. Provide privacy

C. Wash hands

D. Prepare patient

1. Turn patient's head to one side

2. Place towel under chin and to side of face

3. Place emesis basin under mouth

4. If necessary, use padded tongue depressor to hold patient's mouth open; **DO NOT USE YOUR FINGERS**

E. Moisten applicators with solution

(**CAUTION**: Squeeze excess moisture against side of mouth cup to prevent patient from gagging and/or aspirating fluid.)

F. Cleanse upper and lower gums, teeth, and tongue

1. Hold cheek open with tongue depressor

2. Use proper stroke from gum line to apex of mouth

3. Using applicators, clean systematically from left side of mouth to front

4. Discard applicators and tongue depressor

5. Repeat from right side to front of mouth using fresh applicators and tongue depressor

6. Discard applicators and tongue depressor

7. Swab tongue from base to tip gently to prevent gagging

G. Apply lubricant on applicator to lips and outer areas of mouth

(NOTE: Lubricant prevents chapping and promotes healing. Vaseline or glycerine and lemon mixture may be used.)

JOB SHEET #8

H. Care for equipment

  1. Rinse toothbrush thoroughly and return to bedside stand

  2. Empty emesis basin, wash, rinse, dry, and return to designated area

I. Make patient comfortable

J. Wash hands

K. Report and record care and observations

IV. Procedure for cleansing dentures

A. Identify patient and explain procedure

B. Provide privacy

C. Wash hands

D. Assist patient in removing dentures; place dentures in denture cup

(NOTE: Use 4 x 4 gauze pads to hold dentures while removing them.)

E. Have patient rinse mouth with water or mouthwash solution

F. Clean dentures thoroughly with brush and dentifrice, holding them over basin of water

(**CAUTION:** Use cool or slightly warm water. Hot water may cause dentures to crack or break. If dentures accidently slip from your hands, the fall would be cushioned by water in the basin so they would not break.)

G. Place dentures in a denture cup containing fresh mouthwash solution or water

H. Wash hands

I. Return dentures to patient; assist in replacing them

J. Leave dentures in solution in a denture cup marked with patient's name, if not returned to patient's mouth

K. Wash hands

L. Report and record procedure and observations

JOB SHEET #8

V. Checklist for assisting with oral hygiene

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ______________________________		
B.	Identified patient and explained procedure	☐	☐
	Comments: ______________________________		
C.	Provided privacy; washed hands	☐	☐
	Comments: ______________________________		
D.	Assembled equipment	☐	☐
	Comments: ______________________________		
E.	To prepare patient, raised head of bed as permitted	☐	☐
	Comments: ______________________________		

JOB SHEET #8

	Performed well	Needs improvement
F. Placed towel over chest to protect gown and bed covers	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
G. Placed needed equipment on overbed table	☐	☐

Comments: ____________________

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____

	Performed well	Needs improvement
H. Poured water over toothbrush, added dentrifice or toothpaste, and gave toothbrush to patient for brushing	☐	☐

Comments: ____________________

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	Performed well	Needs improvement
I. Held emesis basin under chin	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
J. Had patient rinse mouth with mouthwash solution and fresh water	☐	☐

Comments: ____________________

____

____

JOB SHEET #8

	Performed well	Needs improvement
K. Dried patient's face; removed towel	☐	☐

Comments: ______________________________

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VI. Checklist for assisting helpless or unconscious patients with oral hygiene

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ______________________________

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B. Identified patient and explained procedure	☐	☐

Comments: ______________________________

____

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C. Provided privacy; washed hands	☐	☐

Comments: ______________________________

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D. To prepare patient, turned patient's head to one side	☐	☐

Comments: ______________________________

____

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JOB SHEET #8

		Performed well	Needs improvement
E.	Placed towel under chin and to side of face	☐	☐
	Comments: ______________________		
F.	Placed emesis basin under mouth	☐	☐
	Comments: ______________________		
G.	If necessary used padded tongue depressor to hold patient's mouth open; did not use fingers	☐	☐
	Comments: ______________________		
H.	Moistened applicators with solution	☐	☐
	Comments: ______________________		
I.	Cleansed upper and lower gums, teeth, and tongue with correct procedures	☐	☐
	Comments: ______________________		

JOB SHEET #8

		Performed well	Needs improvement
J.	Applied lubricant on applicator to lips and outer areas of mouth	☐	☐

Comments: ______________________________

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		Performed well	Needs improvement
K.	Cared for equipment correctly	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
L.	Made patient comfortable	☐	☐

Comments: ______________________________

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		Performed well	Needs improvement
M.	Washed hands	☐	☐

Comments: ______________________________

____

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		Performed well	Needs improvement
N.	Reported and recorded care and observations	☐	☐

Comments: ______________________________

____

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JOB SHEET #8

VII. Checklist for cleansing dentures

	Performed well	Needs improvement
A. Identified patient and explained procedure	☐	☐
Comments: ______________________________		
B. Provided privacy; washed hands	☐	☐
Comments: ______________________________		
C. Assisted patient in removing dentures; placed dentures in denture cup	☐	☐
Comments: ______________________________		
D. Had patient rinse mouth with water or mouthwash solution	☐	☐
Comments: ______________________________		
E. Cleaned dentures thoroughly with brush and dentrifice, holding them over basin of water	☐	☐
Comments: ______________________________		

JOB SHEET #8

		Performed well	Needs improvement
F.	Placed dentures in a denture cup containing fresh mouthwash solution or water	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
G.	Washed hands	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
H.	Returned detures to patient; assisted in replacing them	☐	☐

Comments: ____________________

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		Performed well	Needs improvement
I.	Left dentures in solution in a denture cup marked with patient's name, if not returned to patient's mouth	☐	☐

Comments: ____________________

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____

		Performed well	Needs improvement
J.	Washed hands	☐	☐

Comments: ____________________

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____

		Performed well	Needs improvement
K.	Reported and recorded procedure and ovservations	☐	☐

Comments: ____________________

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THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

JOB SHEET #9--COMB AND SHAMPOO HAIR

(NOTE: Patients confined to a bed may not be able to care for their hair as they normally would. A nurse can assist by combing out tangled and unmanageable hair to make the patient more comfortable and feel more attractive. If patient requests a shampoo or if you feel the hair needs one, check with the doctor for permission to do so.)

I. Equipment needed for combing hair

   A. Towel

   B. Comb

   C. Brush

II. Procedure for combing hair

   A. Wash hands

   B. Identify patient and explain procedure

   C. Provide privacy

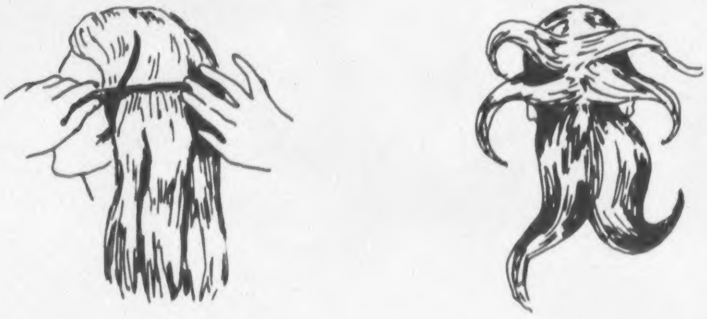
      1. Assist patient into comfortable position

      2. Place towel under head, if in bed, or around shoulders, if in chair

   D. Part hair in sections (Figure 1)

   (NOTE: If hair is long, begin at bottom and work toward crown.)

FIGURE 1



1. Comb or brush each section, holding hair with one hand near head using slow, even strokes to avoid pulling

2. Wet matted hair with alcohol to aid in combing

3. Part and arrange hair according to wishes of patient

JOB SHEET #9

E. Observe condition of scalp and hair; report any unusual findings to supervisor

F. Wash hands

G. Record and report procedure and observations

III. Equipment needed for shampooing hair

A. Shampoo board or waterproof sheet

B. Large pitcher

C. Small pitcher

D. Large basin

E. Waterproof protection for pillow

F. Soap solution or shampoo

G. Newspaper

H. Bath towels

I. Hair dryer, if available

IV. Procedure for shampooing hair

A. Wash hands

B. Identify patient and explain procedure

C. Provide privacy

D. Prepare patient and unit

1. Place bucket on newspaper-covered chair at head of bed

2. Lower backrest of bed and place protective pillow covered with bath towel under patient's head and shoulders

JOB SHEET #9

3. Place shampoo board under head of patient directing board's end into bucket on chair

   (NOTE: If shampoo board is not available, place waterproof sheet over pillow; roll side edges of sheet to form a trough. See Figure 2.)

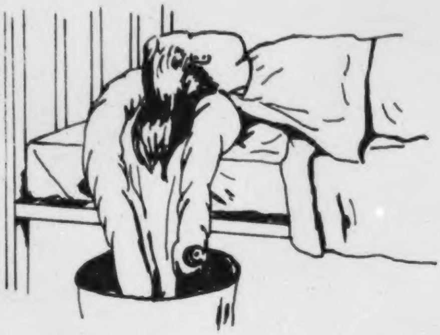


FIGURE 2

4. Cover patient with bath blanket
5. Fanfold top bedding to foot of bed

E. Give shampoo

1. Hold small pitcher at side of head so that solution is not spilled in face
2. Wet hair by pouring small amount of soap solution or shampoo over head
3. Lather and massage scalp well, using fingers
4. Rinse by pouring water from large pitcher over hair
5. Repeat lathering and massaging until hair is clean
6. Rinse and repeat until clear of soap

F. Dry hair

1. Dry forehead and ears with towel
2. Wrap head in towel
3. Remove shampoo board or waterproof sheet and towel from under head
4. Make patient comfortable
5. Brush and comb hair
6. Complete drying with hair dryer or towel

JOB SHEET #9

G. Make patient comfortable

   1. Replace gown, if wet

   2. Replace bath blanket with top bedding

   3. Change pillowcase

   4. Straighten unit; place communication device within reach of the patient

H. Remove equipment

   1. Wash, rinse, and dry shampoo board and pitchers

   2. Return to proper place

I. Wash hands

J. Report and record care and observations

V. Procedure using dry shampoo--Follow manufacturer's instructions

PN I - 599-C

JOB SHEET #9

VI. Checklist for combing hair

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________		
B. Washed hands	☐	☐
Comments: ______________		
C. Identified patient and explained procedure	☐	☐
Comments: ______________		
D. Provided privacy	☐	☐
Comments: ______________		
E. Assisted patient into comfortable position	☐	☐
Comments: ______________		

JOB SHEET #9

		Performed well	Needs improvement
F.	Placed towel under head, if in bed, or around shoulders, if in chair	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		
G.	To part hair in sections, combed or brushed each section, holding hair with one hand near head using slow, even strokes to avoid pulling	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		
H.	Wet matted hair with alcohol to aid in combing	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		
I.	Parted and arranged hair according to wishes of patient	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		
J.	Observed condition of scalp and hair; reported any unusual finding to supervisor	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		

JOB SHEET #9

Performed well Needs improvement

K. Washed hands ☐ ☐

Comments: ____________________

____

____

L. Recorded and reported procedure and observations ☐ ☐

Comments: ____________________

____

____

VII. Checklist for shampooing hair

Performed well Needs improvement

A. Gathered necessary equipment ☐ ☐

Comments: ____________________

____

____

B. Washed hands ☐ ☐

Comments: ____________________

____

____

C. Identified patient and explained procedure ☐ ☐

Comments: ____________________

____

____

JOB SHEET #9

	Performed well	Needs improvement
D. Provided privacy	☐	☐

Comments: ________________________________

____

____

	Performed well	Needs improvement
E. Placed bucket on newspaper-covered chair at head of bed	☐	☐

Comments: ________________________________

____

____

	Performed well	Needs improvement
F. Lowered backrest of bed and placed protective pillow covered with bath towel under patient's head and shoulders	☐	☐

Comments: ________________________________

____

____

	Performed well	Needs improvement
G. Placed shampoo board under head of patient directing board's end into bucket on chair	☐	☐

Comments: ________________________________

____

____

	Performed well	Needs improvement
H. Covered patient with bath blanket	☐	☐

Comments: ________________________________

____

____

JOB SHEET #9

		Performed well	Needs improvement
I.	Fanfolded top bedding to foot of bed	☐	☐
	Comments: ______________________________		
J.	To give shampoo, held small pitcher at side of head so that solution was not spilled in face	☐	☐
	Comments: ______________________________		
K.	Wet hair by pouring small amount of soap solution or shampoo over head	☐	☐
	Comments: ______________________________		
L.	Lathered and massaged scalp well, using fingers	☐	☐
	Comments: ______________________________		
M.	Rinsed by pouring water from large pitcher over hair	☐	☐
	Comments: ______________________________		

JOB SHEET #9

		Performed well	Needs improvement
N.	Repeated lathering and massaging until hair was clean	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
O.	Rinsed and repeated until cleared of soap	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
P.	Dried forehead and ears with towel	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
Q.	Wrapped head in towel	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
R.	Removed shampoo board or waterproof sheet and towel from under head	☐	☐

Comments: ____________________

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____

JOB SHEET #9

		Performed well	Needs improvement
S.	Made patient comfortable	☐	☐
	Comments: ____________________		
T.	Brushed and combed hair	☐	☐
	Comments: ____________________		
U.	Completed drying with hair dryer or towel	☐	☐
	Comments: ____________________		
V.	Replaced patient's gown if wet	☐	☐
	Comments: ____________________		
W.	Replaced bath blanket with top bedding	☐	☐
	Comments: ____________________		

JOB SHEET #9

	Performed well	Needs improvement
X. Changed pillowcase	☐	☐
Comments:		
Y. Straightened unit; placed communication device within reach of the patient	☐	☐
Comments:		
Z. Washed, rinsed, and dried shampoo board and pitchers	☐	☐
Comments:		
AA. Returned equipment to proper place	☐	☐
Comments:		
BB. Washed hands	☐	☐
Comments:		

JOB SHEET #9

	Performed well	Needs improvement
CC. Reported and recorded care and observations	☐	☐

Comments: ____________________

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____

	Performed well	Needs improvement
VIII. Checklist for using dry shampoo-Followed manufacturer's instructions	☐	☐

Comments: ____________________

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THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

JOB SHEET #10--SHAVE A PATIENT

I. Equipment needed

- A. Basin of hot water
- B. Shaving cream or soap
- C. Safety razor
- D. Aftershave lotion or body lotion
- E. Tissues
- F. Mirror
- G. Talcum powder
- H. Face towel

II. Procedure

- A. Wash hands
- B. Prepare patient
  1. Explain procedure to patient
  2. Spread towel under area to be shaved
- C. Prepare equipment
  1. Adjust light so that it shines on area to be shaved
  2. Assemble and place equipment on bedside table
- D. Shave patient
  1. Pat some warm water on area to soften
  2. Apply shaving soap or lather generously
  3. Hold skin taut with fingers of one hand as you shave in the direction that hair grows
  4. Use short strokes and watch for any growths, such as moles or warts

JOB SHEET #10

E. Complete aftershave care
   1. Wash shaved area to remove remaining soap or lather
   2. Apply antiseptic, if skin has been nicked
   3. Apply aftershave, body lotion, or powder if patient desires

F. Care for equipment
   1. Wash, rinse, and dry razor and other equipment
   2. Replace equipment in proper place

G. Wash hands

H. Report and record procedure and observations

JOB SHEET #10

III. Checklist for shaving a patient

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ______________________________		
B.	Washed hands	☐	☐
	Comments: ______________________________		
C.	Explained procedure to patient	☐	☐
	Comments: ______________________________		
D.	Spread towel under area to be shaved	☐	☐
	Comments: ______________________________		
E.	Adjusted light so that it shined on area to be shaved	☐	☐
	Comments: ______________________________		

JOB SHEET #10

		Performed well	Needs improvement
F.	Assembled and placed equipment on bedside table	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
G.	To shave patient, patted some water on area to soften	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
H.	Applied shaving soap or lather generously	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
I.	Held skin taut with fingers of one hand while shaving in the direction hair grows	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
J.	Used short strokes and watched for any growths, such as moles or warts	☐	☐

Comments: ______________________________

____

____

JOB SHEET #10

		Performed well	Needs improvement
K.	Washed shaved area to remove remaining soap or lather	☐	☐
	Comments: ________________ ________________ ________________		
L.	Applied antiseptic if skin was nicked	☐	☐
	Comments: ________________ ________________ ________________		
M.	Washed, rinsed, and dried razor and other equipment	☐	☐
	Comments: ________________ ________________ ________________		
N.	Replaced equipment in proper place	☐	☐
	Comments: ________________ ________________ ________________		
O.	Washed hands	☐	☐
	Comments: ________________ ________________ ________________		

JOB SHEET #10

		Performed well	Needs improvement
P.	Reported and recorded procedure and observations	☐	☐

Comments: ____________________

____

____

THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

JOB SHEET #11--GIVE CARE TO AN INCONTINENT PATIENT

I. Equipment needed

- A. Bed linen, as needed
- B. Bath blanket or cover
- C. Bath towels
- D. Washcloths
- E. Bedpan
- F. Toilet tissue
- G. Incontinent pads
- H. Gown or pajamas
- I. Disposable plastic bag

II. Procedure

- A. Wash hands
- B. Assemble equipment
- C. Identify patient and explain procedure
- D. Provide privacy
- E. Replace top bedding with bath blanket or cover
- F. Remove patient's gown or pajamas
- G. Turn patient on side; fold back bath blanket exposing area to be washed
- H. Remove soiled pad and place in disposable plastic bag
- I. Loosen drawsheet from under mattress, if wet or soiled, and tuck toward patient, keeping soiled part inside
- J. Wipe anal area with tissue and place in plastic bag
- K. Wash and dry buttocks, thighs, and genital area
- L. Rub back and buttocks with lotion

  (NOTE: This improves circulation, protects the skin, and prevents pressure areas.)

JOB SHEET #11

M. Change bed linens

   1. Change drawsheet

   2. Place incontinent pad under buttocks

   3. Have patient turn onto clean side of bed and move to other side of bed

   4. Remove soiled drawsheet, straighten out incontinent pad, and tuck clean drawsheet under mattress

N. Complete care of patient

   1. Put on gown or pajamas

   2. Straighten top bedding and remove bath blanket

   3. Place patient in comfortable position

O. Straighten unit

   1. Empty bath basin

   2. Discard soiled linen

   (NOTE: Care of soiled linen will depend on particular institutional policy; the supervisor can provide this information.)

P. Wash hands

Q. Report and record care and observations

JOB SHEET #11

III. Checklist for giving care to an incontinent patient

Performed well — Needs improvement

A. Gathered necessary equipment ☐ ☐

Comments: ______________________________

____

____

B. Washed hands; assembled equipment ☐ ☐

Comments: ______________________________

____

____

C. Identified patient and explained procedure, provided privacy ☐ ☐

Comments: ______________________________

____

____

D. Replaced top bedding with bath blanket or cover ☐ ☐

Comments: ______________________________

____

____

E. Removed patient's gown or pajamas ☐ ☐

Comments: ______________________________

____

____

JOB SHEET #11

		Performed well	Needs improvement
F.	Turned patient on side; folded back bath blanket exposing area to be washed	☐	☐
	Comments: ____________________ ____________________ ____________________		
G.	Removed soiled pad and placed in disposable plastic bag	☐	☐
	Comments: ____________________ ____________________ ____________________		
H.	Loosened drawsheet from under mattress, if wet or soiled, and tucked toward patient, keeping soiled part inside	☐	☐
	Comments: ____________________ ____________________ ____________________		
I.	Wiped anal area with tissue and placed in plastic bag	☐	☐
	Comments: ____________________ ____________________ ____________________		
J.	Washed and dried buttocks, thighs, and genital area	☐	☐
	Comments: ____________________ ____________________ ____________________		

JOB SHEET #11

		Performed well	Needs improvement
K.	Rubbed back and buttocks with lotion	☐	☐
	Comments: ______		
L.	To change bed linens, changed drawsheet	☐	☐
	Comments: ______		
M.	Placed incontinent pad under buttocks	☐	☐
	Comments: ______		
N.	Had patient turn onto clean side of bed and move to other side of bed	☐	☐
	Comments: ______		
O.	Removed soilded drawsheet, straightened out incontinent pad, and tucked clean drawsheet under mattress	☐	☐
	Comments: ______		

JOB SHEET #11

	Performed well	Needs improvement
P. Put patient's gown or pajamas on patient	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
Q. Straightened top bedding and removed bath blanket	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
R. Placed patient in comfortable position	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
S. Emptied bath basin	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
T. Discarded soiled linen	☐	☐

Comments: ____________________

____

____

JOB SHEET #11

		Performed well	Needs improvement
U.	Washed hands	☐	☐
	Comments:		
V.	Reported and recorded care and observations	☐	☐
	Comments:		

THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

TEST

NAME ____ SCORE ____________

1. Match terms associated with the integumentary system and patient cleanliness to the correct definitions. Write the correct numbers in the blanks.

_____a. Skin or covering, including sweat and oil glands

_____b. Brown crusts which accumulate on the teeth and about the lips from foul stomach or secretions of the mouth

_____c. Study of the skin

_____d. Study of health and observance of health rules

_____e. Anything attached to a larger or major part

_____f. Small depression on the abdomen marking the former attachment of the umbilical cord to the fetus

_____g. Arranged in layers

_____h. Wound or injury, especially that caused by external force

_____i. Covered with or consisting of scales

_____j. Moderately warm or lukewarm

_____k. Outer layer of cells of the skin

_____l. Circular muscle surrounding and closing an opening

_____m. Repair, regrowth, or restoration of a part

_____n. Basin in which the patient sits, immersing only the hips and buttocks

_____o. Pertaining to the skin

_____p. Inability to retain urine or feces through loss of sphincter control

1. Appendage
2. Dermatology
3. Sordes
4. Umbilicus
5. Hygiene
6. Stratified
7. Tepid
8. Trauma
9. Integument
10. Cutaneous
11. Incontinence
12. Regeneration
13. Sitz tub
14. Epithelium
15. Sphincter
16. Squamous

______q. Able to walk

______r. Organs of the reproductive system, especially the external organs

______s. Opening of the rectum

______t. Removal of areas of skin by trauma, scraping, or scratching

______u. Area under arm; armpit

______v. Complement of teeth, either natural or artificial; artificial replacement of one or more teeth, especially a set of false teeth

______w. Prominence of gluteal muscles on the posterior part of the body at the hipline

______x. Lesion, usually over a bony prominence, due to local interference of circulation

______y. Shortening or tightening of a muscle due to spasm, paralysis, or disease

______z. An unimpaired condition

______aa. Perceptible by touch

17. Excoriation
18. Anus
19. Ambulatory
20. Contracture
21. Axilla
22. Buttocks
23. Denture
24. Genitalia
25. Decubitus ulcer
26. Tactile
27. Integrity

2. Distinguish between layers of the skin. Write an "E" for epidermal layer, a "D" for dermal layer, and an "S" for subcutaneous or superficial fascia layer.

______a. Acts as connective tissue framework

______b. Inner layer forms new cells

______c. Attaches the dermis to the underlying structures

______d. Consists of squamous epithelial cells

______e. Lies directly below the epidermis

______f. Contains the pigment or melanin

______g. Covers outer area of the body

______h. Consists of elastic and fibrous tissues and deposits of fat

______i. Contains blood vessels, nerves, lymph vessels, hair follicles, and sweat glands

3. Match the appendages of the skin to their functions. Write the correct numbers in the blanks.

_____a. Secrete oil to lubricate and soften tissue

_____b. Keeps body warm

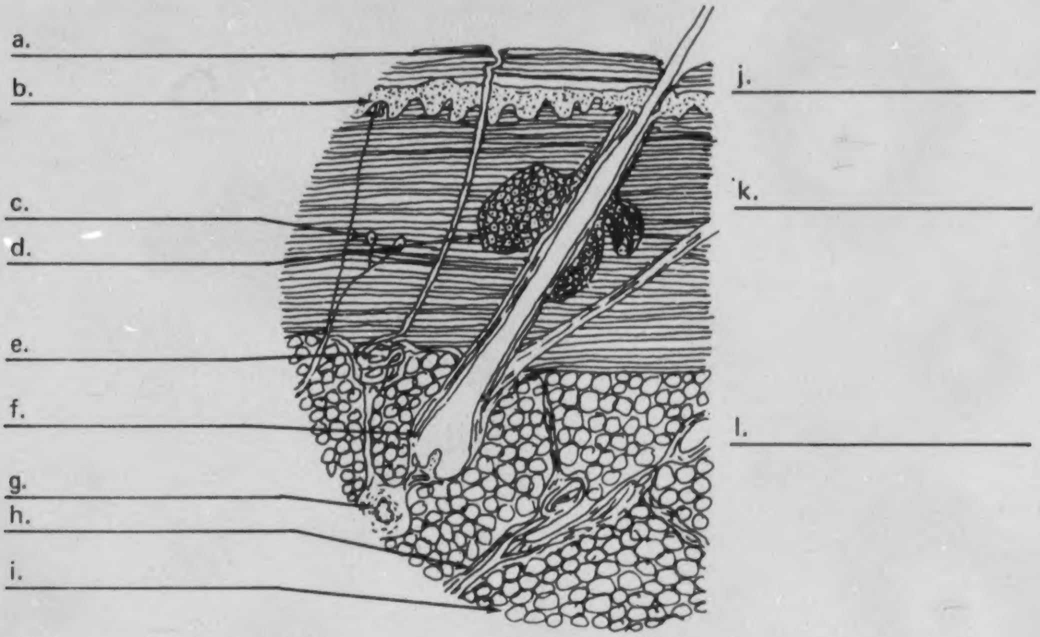
_____c. Secrete wax

_____d. Horny, cutaneous plates that protect delicate tissues

_____e. Secrete body salts, waste products, and water

1. Sudoriferous or sweat glands
2. Nails
3. Ceruminous glands in ears
4. Hair
5. Sebaceous glands

4. Identify the parts of the skin on the diagram below.



Epidermis
Dermis (corium)
Subcutaneous tissue (fascia)
Sudoriferous (sweat) gland
Sebaceous (oil) gland
Hair follicle

Cutaneous nerve endings
Pore (sweat duct opening)
Growing layer
Blood vessel
Fibrous, connective tissue
Adipose (fat) cells

5. Describe the functions of the skin.

a. Sensation-- ______________________________

____

____

____

b. Protection-- ______________________________

____

____

____

c. Regulation of body temperature-- ______________________________

____

____

____

d. Excretion of substances on a limited basis-- ______________________________

____

____

____

____

e. Formation of vitamins-- ______________________________

____

____

____

f. Maintenance of skin surface-- ______________________________

____

____

____

6. Select from the following list characteristics of healthy skin. Write an "X" in the correct blanks.

_____a. Good elasticity

_____b. Hydrated quality

_____c. Decreased turgor

_____d. Consistency of color

_____e. No abnormal odor

_____f. Smooth texture

_____g. Golden color

7. Describe changes in the skin that take place during the aging process.

8. Select from the following list steps to follow when assessing the condition of the skin. Write an "X" in the correct blanks.

_____a. Bathe skin in an antiseptic solution before assessment

_____b. Observe the overall picture of the skin

_____c. Note any abnormal odors of the skin

_____d. Apply lotion or medicated ointment to areas you feel need them

_____e. Observe the skin and mucous membranes for changes or abnormalities in color, swelling, or signs that patient has been scratching, rubbing, or picking at the skin

_____f. Cleanse thoroughly any area that has a rash

_____g. Make sure you have as natural a light source as possible

_____h. Touch the skin to check the temperature, texture, and secretions

9. Match abnormalities of the skin to their descriptions. Write the correct numbers in the blanks. Terms and definitions are continued on the next page.

_____a. Bluish-gray color that is best seen in the skin around the lips, cheeks, and ear lobes

_____b. Yellowish pigment found on the skin and the sclera (white portion of the eye)

_____c. Hemorrhagic areas under the skin which may appear in small areas (petechiae) or in larger areas

1. Jaundice
2. Ecchymoses (bruises)
3. Cyanosis

______ d. Paleness of skin, best assessed in nail beds, lips, and conjunctiva (lining of the eyelid)

______ e. Form of a rash showing redness over the skin

______ f. Condition of spotting with patches of color

______ g. Swelling caused from retention of fluid in tissues that can be seen and felt in the tissue area

4. Erythema
5. Pallor
6. Edema
7. Mottling

10. Select from the following list factors that may cause a patient to develop decubiti. Write an "X" in the correct blanks.

______ a. Immobility

______ b. Rigor mortis

______ c. Malnutrition

______ d. Incontinence

______ e. Muscle enlargement

______ f. Poor circulation

11. Describe methods to prevent decubiti.

____

____

____

____

____

____

12. Select from the following list purposes of daily body care. Write an "X" in the correct blanks.

______ a. Improve elimination

______ b. Improve beauty

______ c. Observe patient's skin for pressure areas, bruises, excoriations, rashes, or other lesions

______ d. Cleanse, refresh, and soothe the patient

______ e. Relax muscles

______f. Prevent contractures with planned exercises

______g. Relieve restlessness

______h. Decrease hypostasis

______i. Stimulate circulation

______j. Observe patient's physical and mental status

13. List routine morning care procedures.

a. ____________________

b. ____________________

c. ____________________

d. ____________________

e. ____________________

f. ____________________

g. ____________________

h. ____________________

14. Assess condition of the skin.

15. Demonstrate the ability to:

a. Assist with a tub bath or shower.

b. Assist with a sitz bath.

c. Assist with or give a partial or self-help bath.

d. Give a complete bed bath.

e. Apply anti-embolism stockings.

f. Give range-of-motion exercises (active and passive).

g. Give a back rub.

h. Assist with oral hygiene.

i. Comb and shampoo hair.

j. Shave a patient.

k. Give care to an incontinent patient.

(NOTE: If activities 14 and 15 have not been finished before the test, ask your instructor when they should be completed.)

THE INTEGUMENTARY SYSTEM AND PATIENT CLEANLINESS
UNIT VI

ANSWERS TO TEST

1. a. 9
   b. 3
   c. 2
   d. 5
   e. 1
   f. 4
   g. 6
   h. 8
   i. 16
   j. 7
   k. 14
   l. 15
   m. 12
   n. 13
   o. 10
   p. 11
   q. 19
   r. 24
   s. 18
   t. 17
   u. 21
   v. 23
   w. 22
   x. 25
   y. 20
   z. 27
   aa. 26

2. a. D
   b. E
   c. S
   d. E
   e. D
   f. E
   g. E
   h. S
   i. D

3. a. 5
   b. 4
   c. 3
   d. 2
   e. 1

4.
   a. Pore (sweat duct opening)
   b. Growing layer
   c. Cutaneous nerve endings
   d. Sebaceous (oil) gland
   e. Sudoriferous (sweat) gland
   f. Hair follicle
   g. Blood vessel
   h. Fibrous, connective tissue
   i. Adipose (fat) cells
   j. Epidermis
   k. Dermis (corium)
   l. Subcutaneous tissue (fascia)

5. Descriptions should include:
   a. Sensation
      1) Basic sensations are pain, temperature, touch, and pressure
      2) Permits body to adjust to environmental changes
   b. Protection
      1) Forms an elastic covering for protection against the external environment
      2) Prevents excessive loss of fluids and electrolytes
      3) Prevents invasion of microorganisms
      4) Repels water
   c. Regulation of body temperature
      1) Evaporation of perspiration cools the skin
      2) Adjustment of size of blood vessels increases or decreases heat loss
      3) Fatty tissue acts as insulation to prevent heat loss
   d. Excretion of substances on a limited basis
      1) Excretes water through pores.
      2) Releases salt through skin
      3) Eliminates waste products through integumentary system
   e. Formation of vitamins--Forms vitamin D when exposed to sun or ultraviolet light
   f. Maintenance of skin surface
      1) Secretes oil to maintain elasticity
      2) Provides a water-resistant base

6. a, b, d, e, f
7. Description should include:
    - a. Becomes drier and is prone to wrinkling
    - b. May become thin and translucent
    - c. Is very susceptible to any irritations; bruises easily
8. b, c, e, g, h
9. a. 3
    - b. 1
    - c. 2
    - d. 5
    - e. 4
    - f. 7
    - g. 6
10. a, c, d, f
11. Description should include:
    - a. Keep patient dry
    - b. Turn patient frequently to prevent continued pressure on bony prominences
    - c. Make sure patient has well-balanced, high protein diet
    - d. Massage gently areas that have poor circulation
12. a, c, d, e, f, g, i, j
13. a. Bath
    - b. Oral hygiene
    - c. Care of fingernails and toenails
    - d. Care of hair and scalp
    - e. Shaving the patient
    - f. Back rub
    - g. Bedmaking
    - h. Positioning and/or exercise, as ordered or required
14. Evaluated to the satisfaction of the instructor
15. Performance skills evaluated to the satisfaction of the instructor

Practical Nursing
Volume I

Teacher Part II

OK20133011

MUSCULOSKELETAL SYSTEM AND PATIENT MOVEMENT
UNIT VII

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of the muscles and skeleton of the human body to assist patients in the prevention of damage to these systems and to care for patients using skills that protect, maintain, and treat the muscles and bones. The student should also be able to assess the patient's ability to ambulate. This knowledge will be evidenced by completion of assignment sheet, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the muscular system to the correct definitions.
2. Distinguish between types of muscle tissues.
3. List parts of the muscle.
4. Match characteristics of muscle tissue to the correct definitions.
5. Select from a list major functions of the muscles.
6. Identify types of muscle actions.
7. List criteria to use to help remember names of muscles.
8. Identify principal skeletal muscles on given diagrams.
9. Match terms associated with muscle movement to the correct definitions.
10. Describe the mechanisms of movement of muscles.
11. Match terms associated with the skeletal system to the correct definitions.
12. Select from a list functions of the skeletal system.
13. List the elements found in bones.
14. Match structures of the bones to the correct descriptions.
15. Label structures of a typical long bone.
16. Describe major changes in bone development at various stages of the life cycle.
17. Distinguish between types of bones.
18. List common bone markings.
19. Distinguish between divisions of the skeleton.

20. Identify bones of the skull on given diagrams.

21. Label the sinuses found in the skull.

22. Identify regions of the spinal column on a given diagram.

23. Label the bones of the chest, upper back, and shoulder.

24. Match the names of the ribs to the correct descriptions.

25. Label the bones of the arm and the hand on a given diagram.

26. Identify the bones of the pelvis on a given diagram.

27. Identify the bones of the leg on a given diagram.

28. Distinguish between the male (android) and female (gynecoid) pelvis.

29. Classify joints according to the amount of movement.

30. Describe the types of freely movable joints.

31. Discuss the growth of bones.

32. Match terms associated with patient movement to the correct definitions.

33. Select from a list ways in which exercise promotes functioning of the patient's body.

34. List factors which alter mobility.

35. Select from a list effects of immobility.

36. Match nursing measures to prevent or decrease effects of immobility to the correct descriptions.

37. List devices used for the therapeutic comfort of the patient confined to bed.

38. Label various body positions.

39. Select from a list common safety devices used for patients confined to bed.

40. State precautions to observe when using devices that restrict movement.

41. Assess mobility.

42. Demonstrate the ability to:

    a. Position the patient.

    b. Use turn sheet.

    c. Apply restraints.

    d. Assist patient to dangle.

e. Use patient lift.

f. Get patient into chair and wheelchair.

g. Assist patient to walk.

h. Put patient on carrier.

MUSCULOSKELETAL SYSTEM AND PATIENT MOVEMENT
UNIT VII

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information sheet.

   C. Discuss unit and specific objectives, and make transparencies.

   D. Use model of skeleton and muscles to demonstrate anatomy.

   E. Dissect animal bones and muscles to show more realistic anatomy.

      (NOTE: This is an excellent way of showing the musculoskeletal system and joint movement.)

   F. Obtain and show X-rays of a bone that is still growing and a bone that has stopped growing.

   G. Provide students with assignment sheet.

   H. Have students practice assessment of mobility using classmates, staff, or others as patients.

      (NOTE: Write examples of descriptive notes to demonstrate the correct terminology.)

   I. Emphasize the importance of the use of good body mechanics for the nurse and the patient.

      (NOTE: This would be an excellent time to have a physical therapist visit the class.)

   J. Show and demonstrate equipment used for the comfort and treatment of the patient confined to bed.

   K. Demonstrate job skills in laboratory area.

   L. Provide time for students to practice skills outlined in job sheets using realistic equipment.

      (NOTE: Write to the J.T. Posey Company, 39 South Altadena Drive, Pasadena, California 91107 for films, pamphlets, and various types of restraints with which to practice.)

   M. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

C. Transparency masters

  1. TM 1--Coordinated Movement
  2. TM 2--Skeleton of Head
  3. TM 3--Skeleton of Head of Infant
  4. TM 4--The Spinal Column
  5. TM 5--Ball and Socket Joint
  6. TM 6--Hinge Joint
  7. TM 7--Pivot Joint
  8. TM 8--Contractures Due to Faulty Bed Position
  9. TM 9--One Type of Overhead Frame

D. Assignment Sheet #1--Assess Mobility

E. Job sheets

  1. Job Sheet #1--Position the Patient
  2. Job Sheet #2--Use Turn Sheet
  3. Job Sheet #3--Apply Restraints
  4. Job Sheet #4--Assist Patient to Dangle
  5. Job Sheet #5--Use Patient Lift
  6. Job Sheet #6--Get Patient into Chair and Wheelchair
  7. Job Sheet #7--Assist Patient to Walk
  8. Job Sheet #8--Put Patient on Carrier

F. Test

G. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study*. Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

B. Sloan, Jamee. *Health Service Careers*. Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1979.

C. Jacob, Stanley W.; Francone, Clarice, and Lossow, Walter. *Structure and Function in Man*. Philadelphia: W.B. Saunders Company, 1978.

D. Memmler, Ruth, and Wood, Dena Lin. *The Human Body in Health and Disease.* Philadelphia: J.B. Lippincott Company, 1977.

E. Hole, John W., Jr. *Human Anatomy and Physiology.* Dubuque, Iowa: Wm. C. Brown Company Publishers, 1981.

IV. Film--*I Am Joe's Spine.* Color, 26 min., Pyramid Films, 1973. Available from Pyramid Films, P.O. Box 1048, Santa Monica, California 90406.

(NOTE: This film is available to Oklahoma teachers *only* through the Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order from the address listed above.)

V. Filmstrips:

(NOTE: The following filmstrips are available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.)

A. *Transfer Activities and Ambulation.*

B. *Use of Patient Lifters.*

C. *Use of Protective Restraints.*

D. *Use of Restraints.*

E. *Use of Stretchers.*

F. *Use of Wheelchairs.*

G. *Articular Anatomy and Physiology.*

H. *Lifting and Moving Patients.*

MUSCULOSKELETAL SYSTEM AND PATIENT MOVEMENT
UNIT VII

INFORMATION SHEET

I. Terms associated with the muscular system

A. Myology--Study of muscles

B. Tendon--Narrow strip of dense, connective tissue that attaches a muscle to a bone

C. Aponeurosis--Flat, fibrous sheet of connective tissue that attaches muscle to bone or other tissues at their origin or insertion

D. Origin--Beginning of something; the more fixed attachment of the muscle

E. Insertion--Place of attachment of a muscle to the bone so that movement may take place

(NOTE: When a muscle contracts, the insertion is pulled toward its origin.)

F. Ambulatory--Able to walk

G. Flaccid--Lacking tone in muscle

H. Muscle fatigue--Loss of power to contract after prolonged periods of muscle contraction

I. Atrophy--Wasting away (degeneration)

(NOTE: If muscles are not used due to disease or immobility, they begin to get smaller and weaker.)

J. Prime movers--Muscles that are responsible for prime action

(NOTE: Muscles usually do not act alone, but function as groups to move.)

K. Synergists--Muscles that assist the prime movers by stabilizing the joint

L. Joint--Point of junction between two bones

Examples: Knee, elbow

M. Antagonists--Muscles in the group that oppose the action of the prime mover and that must be relaxed so that movement may take place

N. Intramuscular--Within a muscle

O. Voluntary--Controlled by the will

P. Involuntary--Independent of the will

INFORMATION SHEET

II. Types of muscle tissues

A. Skeletal or striated

(NOTE: These muscles constitute approximately 40 percent of body weight.)

1. Sometimes referred to as *voluntary muscle*
2. Made up of several fibers, each containing a muscle cell
3. Responsible for movement of the bones

Example:

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B. Smooth or nonstriated

1. Sometimes referred to as *visceral, involuntary muscle*
2. Made up of fibers in flat sheets that have cells with one nucleus
3. Form layers of the walls of hollow organs and blood vessels
4. Responsible for slower, sustained contractions needed in digestion, circulation of body fluids

Example:

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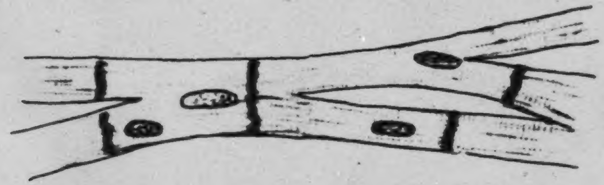
INFORMATION SHEET

C. Cardiac

1. Action of muscle is involuntary
2. Form the majority of the heart wall
3. Fibers divide and interconnect, but each has a separate cell

Example:



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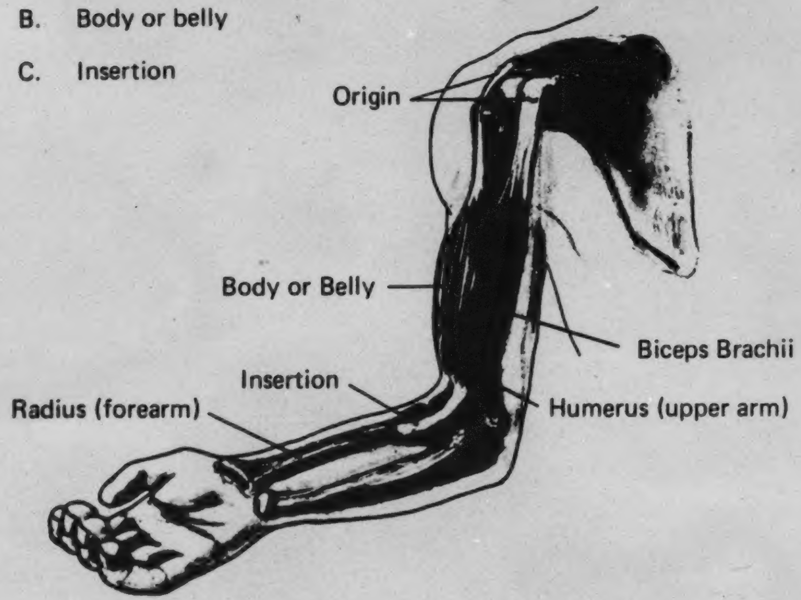
III. Parts of the muscle (Transparency 1)

A. Origin

(NOTE: Usually, the attachment of origin is the end of the muscle, closer to the trunk.)

B. Body or belly

C. Insertion


Origin
Body or Belly
Biceps Brachii
Insertion
Radius (forearm)
Humerus (upper arm)

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INFORMATION SHEET

IV. Characteristics of muscle tissue

- A. Contractility--Ability to contract or shorten

  (NOTE: Muscles work in pairs as they contract and relax.)

- B. Elasticity--Ability to return to original size and shape after being stretched
- C. Extendability--Ability to stretch or lengthen
- D. Irritability--Ability to respond to a stimulus
- E. Tonus--Slight tension in muscle, present at all times to allow muscle to act more easily and quickly

V. Major functions of the muscles

- A. Movement

  (NOTE: Muscles allow for movement from one place to another, for small refined movements, such as adjustment of pupil to light, and for internal movement, such as moving of blood through vessels.)

- B. Heat and energy that result from a chemical reaction
- C. Posture and body mechanics

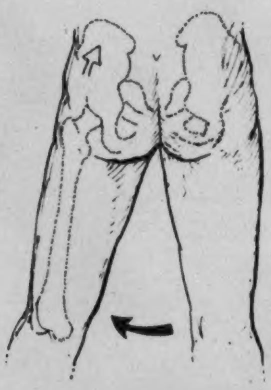
  (NOTE: Muscles function with bones, joints, nerves, and the brain to maintain balance and posture and to allow body to run, lift, sit, stand, walk, and bend.)

- D. Protection of internal organs

INFORMATION SHEET

VI. Types of muscle actions

A. Abduction moves away from a part



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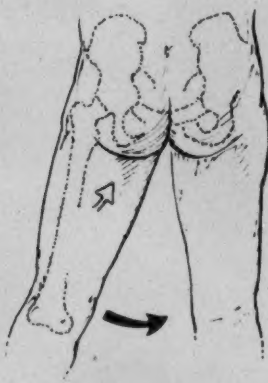
B. Adduction moves toward a part or midline



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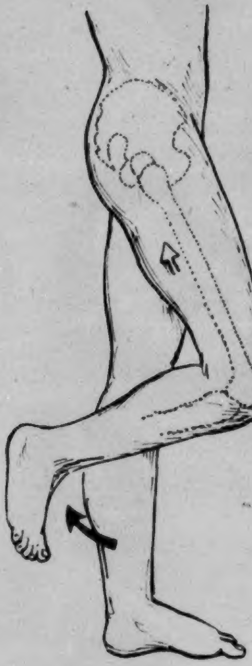
INFORMATION SHEET

C. Flexion bends a joint



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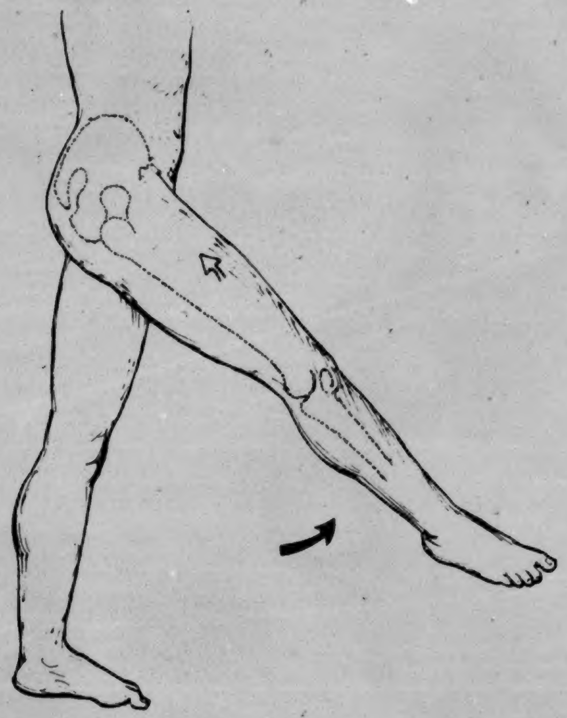
INFORMATION SHEET

D. Extension straightens a joint



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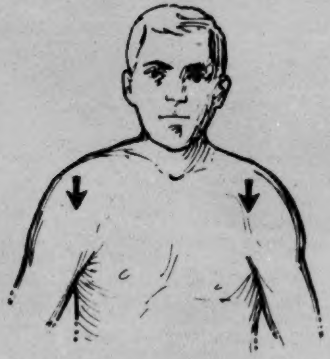
E. Depression lowers a part



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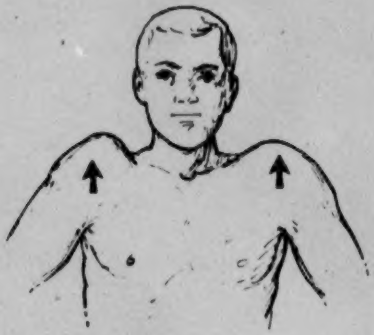
F. Elevation lifts a part



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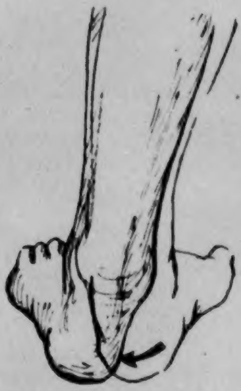
G. Eversion turns a part outward



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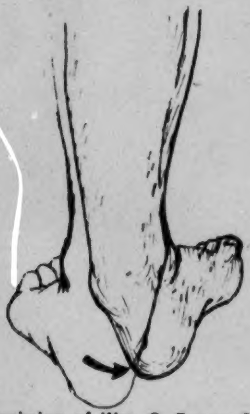
H. Inversion turns a part inward



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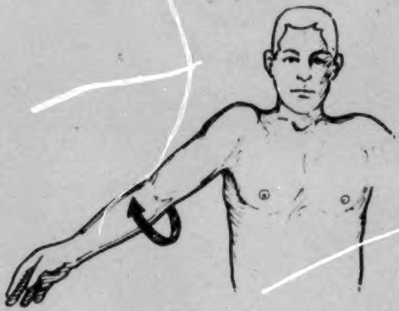
I. Rotation moves a part around an axis



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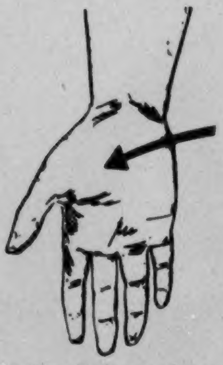
J. Supination moves the hand so that the palm is up



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K. Pronation moves the hand so that the palm is down

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VII. Criteria to use to help remember names of muscles

(NOTE: It is easier to remember the names of muscles if you take into consideration the criteria listed below.)

A. Action

Example: *Extensor* digotorum longus muscle

B. Shape

Example: Trapezius

C. Origin and insertion

Example: Sternocleidomastoid

D. Division number

Example: Quadriceps, biceps

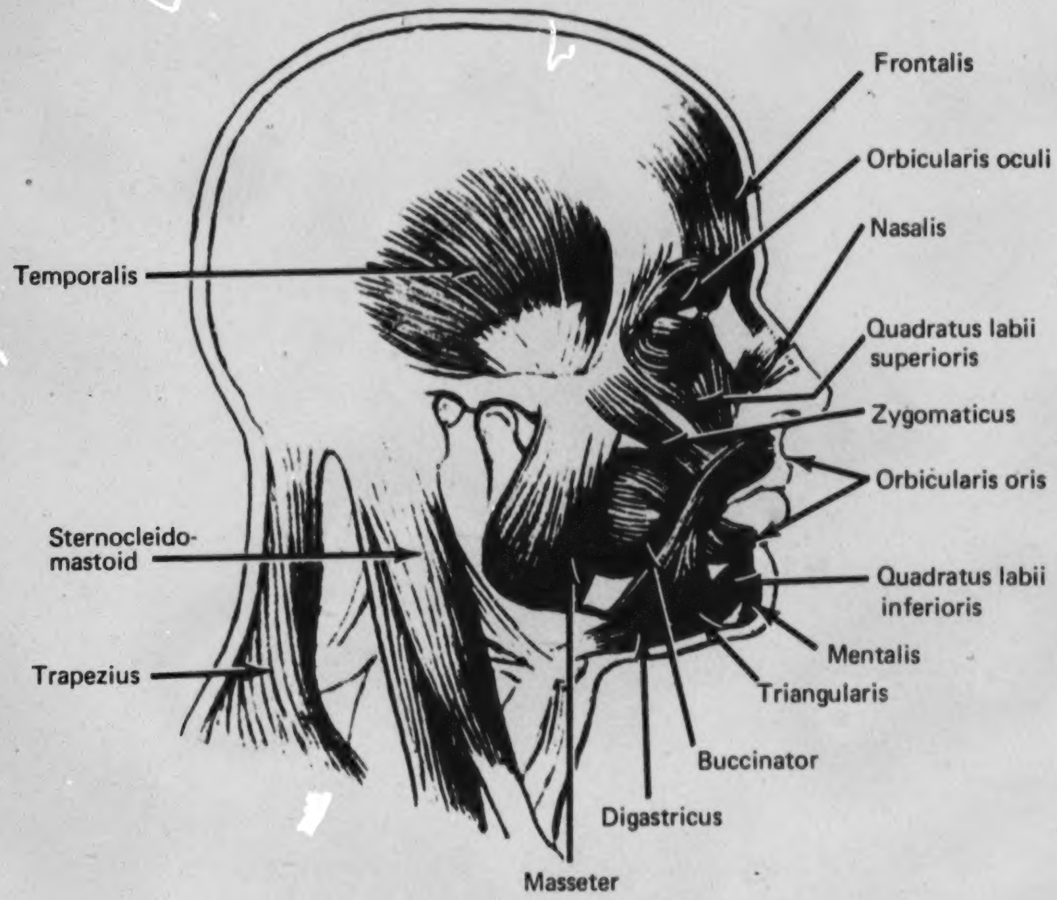
E. Direction of fibers

Example: Transversus

INFORMATION SHEET

VIII. Principal skeletal muscles

A. Head and neck


Frontalis
Orbicularis oculi
Nasalis
Temporalis
Quadratus labii superioris
Zygomaticus
Orbicularis oris
Sternocleido-mastoid
Quadratus labii inferioris
Mentalis
Trapezius
Triangularis
Buccinator
Digastricus
Masseter

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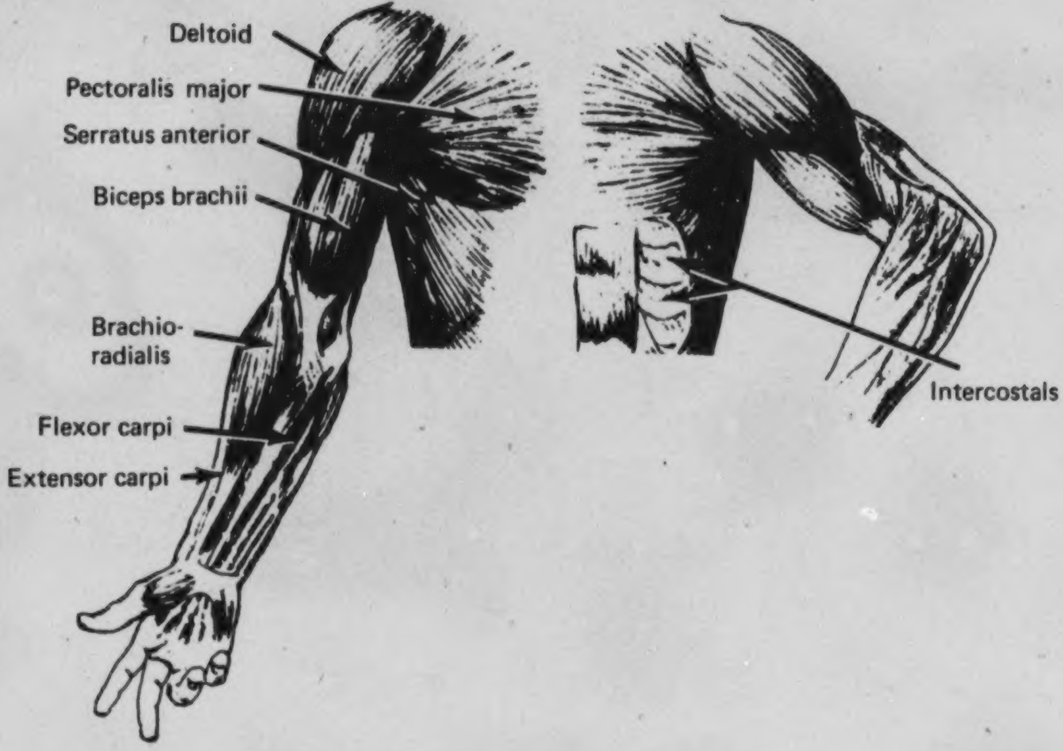
INFORMATION SHEET

B. Chest and arm


Deltoid
Pectoralis major
Serratus anterior
Biceps brachii
Brachio-
radialis
Flexor carpi
Extensor carpi
Intercostals

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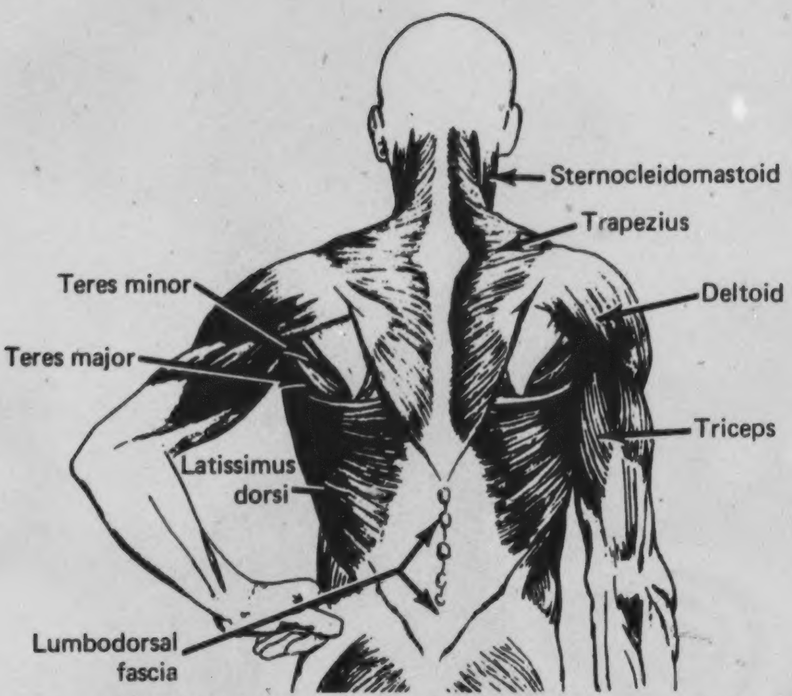
INFORMATION SHEET

C. Back


Sternocleidomastoid
Trapezius
Teres minor
Deltoid
Teres major
Triceps
Latissimus dorsi
Lumbodorsal fascia

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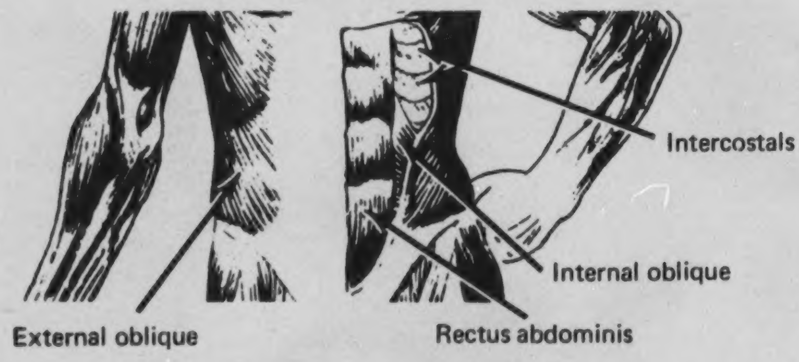
D. Abdomen


Intercostals
Internal oblique
External oblique
Rectus abdominis

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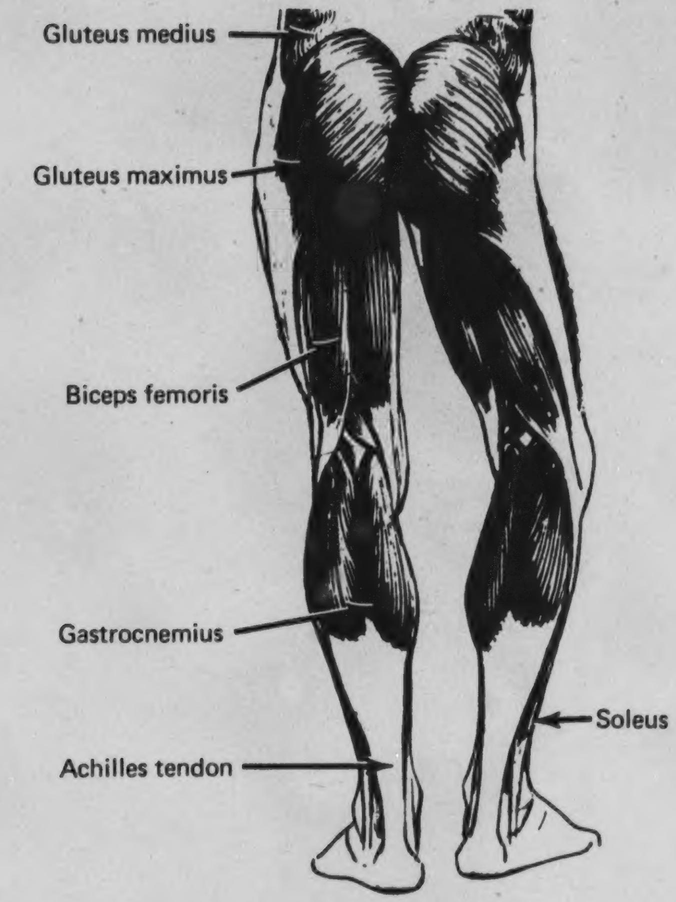
INFORMATION SHEET

E. Buttocks and posterior leg


Gluteus medius
Gluteus maximus
Biceps femoris
Gastrocnemius
Soleus
Achilles tendon

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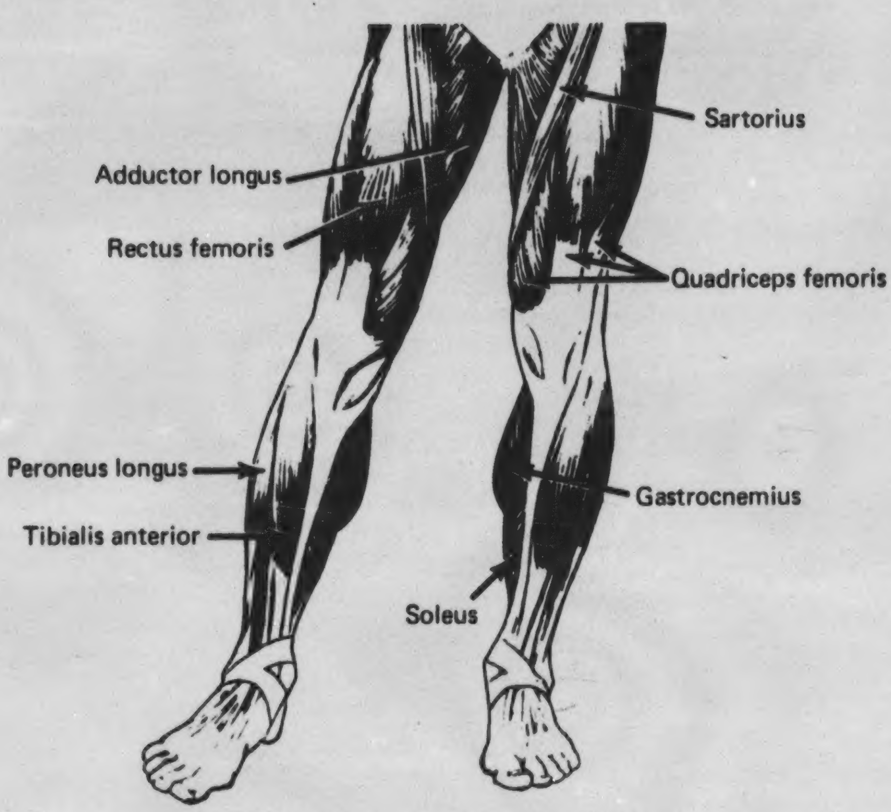
INFORMATION SHEET

F. Anterior leg


Sartorius
Adductor longus
Rectus femoris
Quadriceps femoris
Peroneus longus
Gastrocnemius
Tibialis anterior
Soleus

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IX. Terms associated with muscle movement

A. Motor end plate--Ending of a motor nerve fiber on a skeletal muscle fiber

B. Acetylcholine--Compound which plays an important role in the transmission of nerve impulses

(NOTE: When a nerve impulse comes to the motor end plate, acetylcholine is released to aid in muscle movement.)

C. All-or-none law--Law that a stimulus to a nerve or muscle causes the muscle or nerve to respond to its greatest extent, or not at all

(NOTE: The strength of a muscle's response and contraction depends mostly on the number of fibers stimulated and is regulated by the nervous system.)

INFORMATION SHEET

D. ATP (Adenosine triphosphate)--Compound (enzyme) that when split, produces energy to assist in muscle movement

(NOTE: ATP is found in all cells, but particularly in muscle cells.)

E. Muscle fatigue--Condition that occurs when muscles continue to act without oxygen and build up end products, such as lactic acid, and energy fails

F. Tetanus--State of sustained contraction of a muscle

G. Twitch--Quick contraction of a muscle

H. Isometric muscle contraction--Muscle increases its tension without shortening

(NOTE: Muscle activity of this type maintains posture.)

I. Isotonic muscle contraction--Occurs when equal tension on the muscle is held while the length of the muscle is decreased

(NOTE: Muscle activity of this type moves the body.)

J. Autonomic nervous system--Part of the nervous system that controls involuntary body functions

(NOTE: This controls functions of glands, smooth muscle tissue, and the heart.)

X. Mechanisms of movement of muscles

A. Skeletal muscle

1. Brain signals arrive at the junction of nerve and muscle at the motor end plate

2. Muscle fibers glide toward each other and mesh, causing muscle to shorten and contract

3. Acetylcholine is released when brain signals reach nerve-muscle junction, acting as excitants to put the muscle membrane on alert

4. Breakdown of ATP occurs to supply the muscle with energy

   (NOTE: This breakdown is made possible by the conversion of glycogen, the fuel supplied to the muscle in the form of glucose, a sugar.)

5. Contraction itself is then begun by the release of calcium from the muscle membrane

INFORMATION SHEET

6. Relaxation takes place as calcium is released, then stored up between the muscle fibrils

   (NOTE: Skeletal muscles must be stimulated to contract and relax. If not stimulated, muscles will become atrophied.)

B. Cardiac muscle

1. Cardiac muscles usually initiate their own contractions from the autonomic nervous system

2. Contraction of the sheet of cardiac muscle involves all the cells, but the strength of the contraction is related, like skeletal muscle, to the original length of the fibers and is influenced by the autonomic nerves

   (NOTE: Cardiac muscle, when weakened by disease, trauma, and damage, may have difficulty in contracting. Many heart conditions are due to the damage done to the blood vessels, lymphatic vessels, and nerves contained in the muscle tissue.)

C. Smooth muscle

1. Smooth muscle forms with other tissues, often in sheets of parallel fibers

2. Contractions are stimulated by nerves of the autonomic nerve fibers

3. Can be contracted for long periods without additional energy, unlike the skeletal muscles

XI. Terms associated with the skeletal system

A. Bone markings--Openings, hollows, depressions, projections, or processes which serve a specific purpose

B. Condyle--Knob or rounded piece at the end of a bone that helps make a joint

C. Crest--Narrow edge or ridge on a bone

D. Foramen--Hole or opening for passage of blood vessels, nerves, and ligaments

E. Fossa--Depression or hollow, usually to accommodate some other nearby structure

F. Head--Rounded portion beyond the narrow neckline portion of a long bone

G. Sinus--Chamber or cavity in a bone

H. Process--Small, rounded bone projection

INFORMATION SHEET

I. Meatus--Tube-shaped opening

J. Appendicular--Pertaining to a limb or an appendage

K. Medullary cavity--Central space in a long bone

L. Axial--Pertaining to the central part; the skeleton of the head and trunk

M. Osteology--Study of bones

N. Arthrology--Study of joints

O. Articulation--Point where bones are joined together; a joint

P. Cartilage--White elastic substance attached to bone surfaces at the joints

Q. Fontanel--In the fetus and newborn, the membranous site of the future union of two or more bones

R. Trochanter--Very large process on a bone

S. Tuberosity--Large roughened projection

T. Gynecoid--Womanlike; resembling a woman

U. Android--Manlike; resembling a man

V. Ligament--Tough, fibrous band binding together bones or supporting internal organs

W. Suture--Line of junction of cranial bones

X. Acromial process--Triangular projection of the spine of the scapula that forms the point of the shoulder and articulates with the clavicle

XII. Functions of the skeletal system

A. Provides shape and support

B. Assists in body movement

C. Protects vital organs

D. Manufactures red blood cells, platelets, and some white cells

E. Stores minerals, such as calcium and phosphorus

INFORMATION SHEET

XIII. Elements found in bones

A. Inorganic salts, such as calcium phosphate

B. Organic materials, such as bone cells, blood vessels, nerves, and cartilage

C. Water

XIV. Structures of the bones

A. Epiphysis--End of long bone

(NOTE: It is possible to determine whether a child's long bones are still growing by X-raying to see if the epiphyseal disks are present. If damage occurs before bones are hardened, then the bone may cease to form.)

B. Diaphysis--Center of long bone

C. Periosteum--Exterior covering of bones, except in joints

D. Articular cartilage--Covering of bones in joint areas

E. Compact bone--Dense, hard layer of bone tissue just beneath the periosteum

F. Cancellous bone--Layer of spongy bone found inside the compact bone, especially in the epiphysis; contains red marrow which produces red blood cells

G. Medullary cavity--Bone marrow cavity

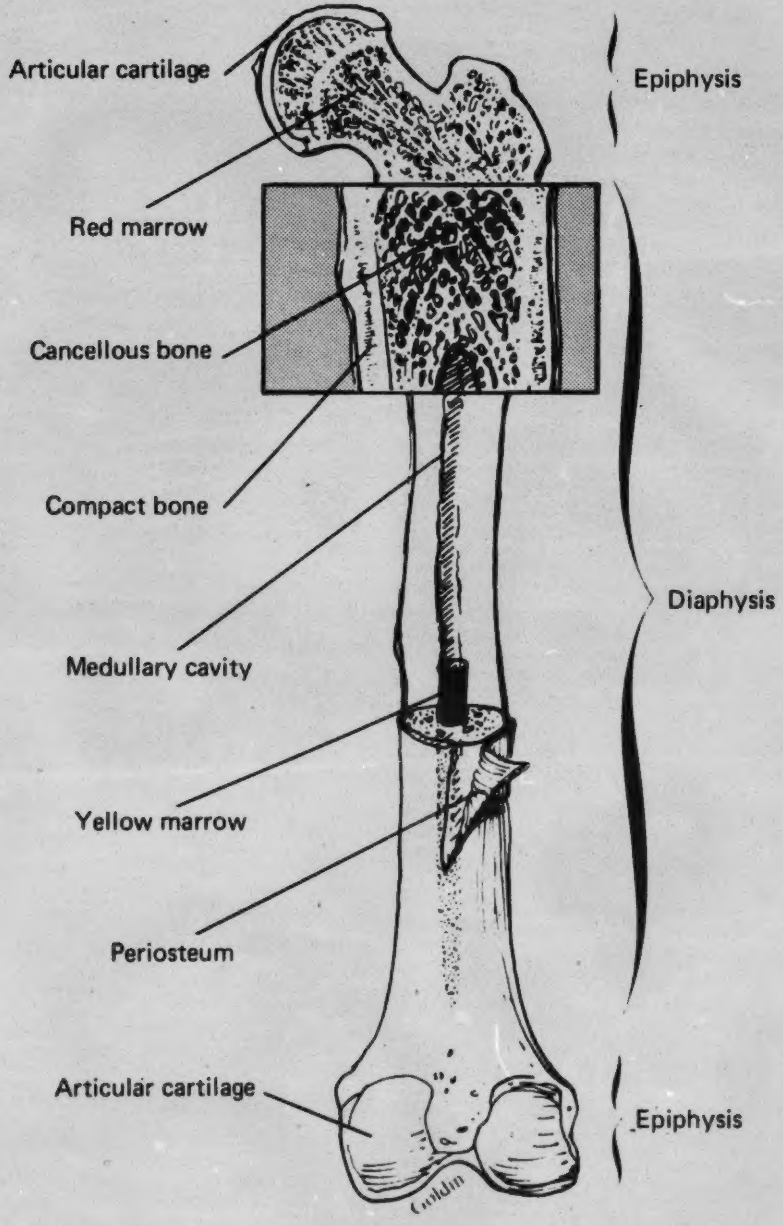
(NOTE: In childhood, it is filled with red marrow. In adults, it is filled with yellow marrow, a fatty tissue.)

H. Endosteum--Lining of the medullary cavity

I. Epiphyseal cartilage--Layer of cartilage between the epiphysis and the diaphysis where growth takes place

INFORMATION SHEET

XV. Structures of a typical long bone


Articular cartilage
Red marrow
Cancellous bone
Compact bone
Medullary cavity
Yellow marrow
Periosteum
Articular cartilage
Epiphysis
Diaphysis
Epiphysis
Goldin

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INFORMATION SHEET

XVI. Major changes in bone development at various stages of the life cycle

(NOTE: Ages shown below are approximate.)

A. Embryo (approximately four months)--Most of the centers have appeared in the diaphyses of the bones

B. Birth-five years--Secondary ossification centers appear in the ephiphyses; the cranium grows rapidly during early childhood; and the two vertebral curves develop

(NOTE: Ossification refers to the formation of hardened bone.)

C. Five-12 years--Ossification rapidly spreads from the centers; various bones begin to harden; facial bones grow slowly

D. 18-23 years--Bones in the upper limbs become completely ossified and the pelvis becomes relatively larger and wider in the female

E. 23-25 years--Bones of the lower limbs and os coxae are completely hardened and the sternum, clavicles, and vertebrae are completely hardened

(NOTE: The skeleton continues to change throughout adulthood to old age. X-rays show that the bones of the elderly have less clear margins and projections. Because of degeneration, spurs from old age build up around joints and movement becomes more restricted.)

XVII. Types of bones

A. Long--Length is greater than its breadth

1. Humerus
2. Radius
3. Ulna
4. Femur
5. Tibia
6. Fibula

B. Short--Length and breadth nearly equal

1. Wrist
2. Ankle

INFORMATION SHEET

C. Flat--Two layers of compact bone separated by a narrow space

   1. Skull
   2. Sternum
   3. Ribs
   4. Shoulder blade

D. Irregular--Mixed shapes that do not fit in the first three groups

   1. Face
   2. Spinal
   3. Hip

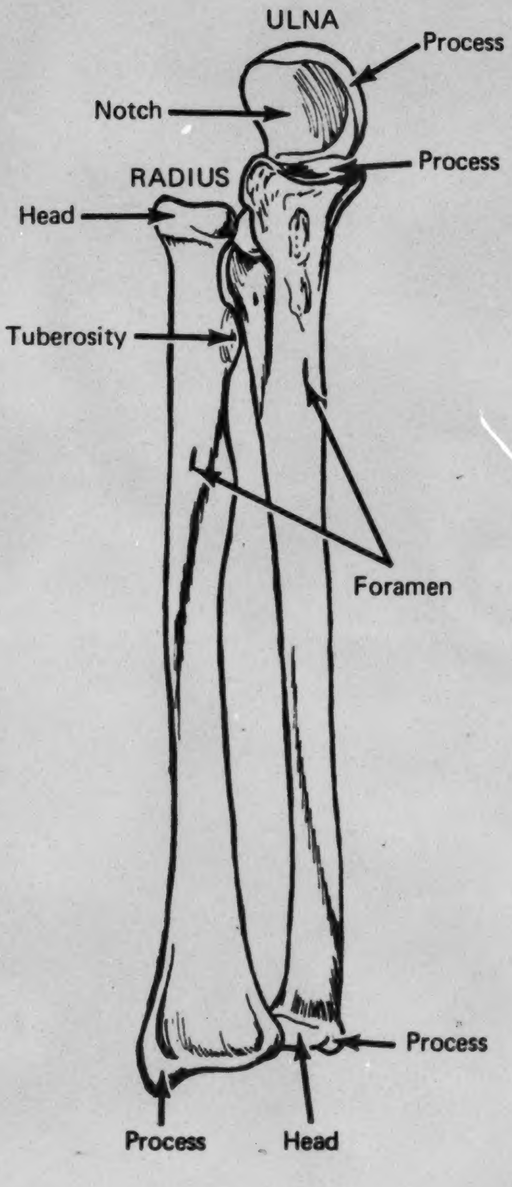
E. Sesamoid--Patella

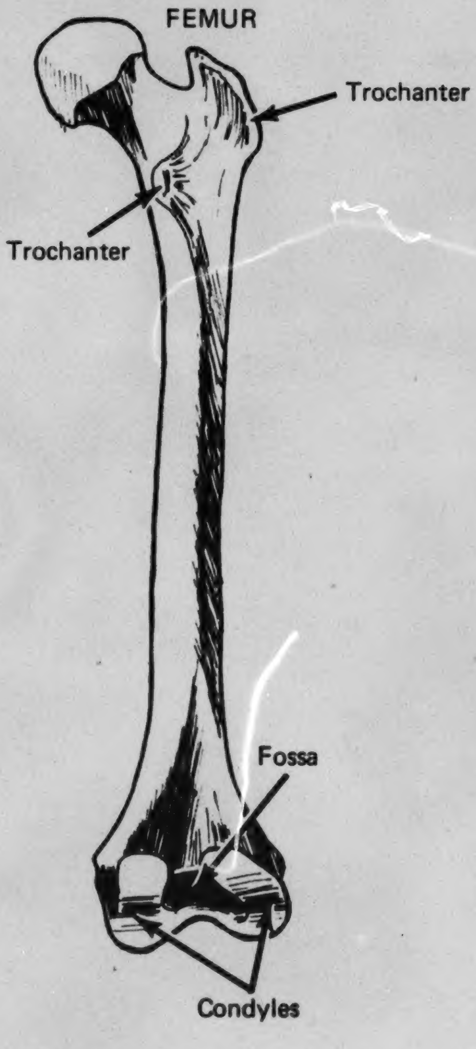
XVIII. Common bone markings

   A. Condyle
   B. Fossa
   C. Head
   D. Process
   E. Tuberosity
   F. Trochanter
   G. Notch
   H. Sinus
   I. Foramen
   J. Crest

INFORMATION SHEET

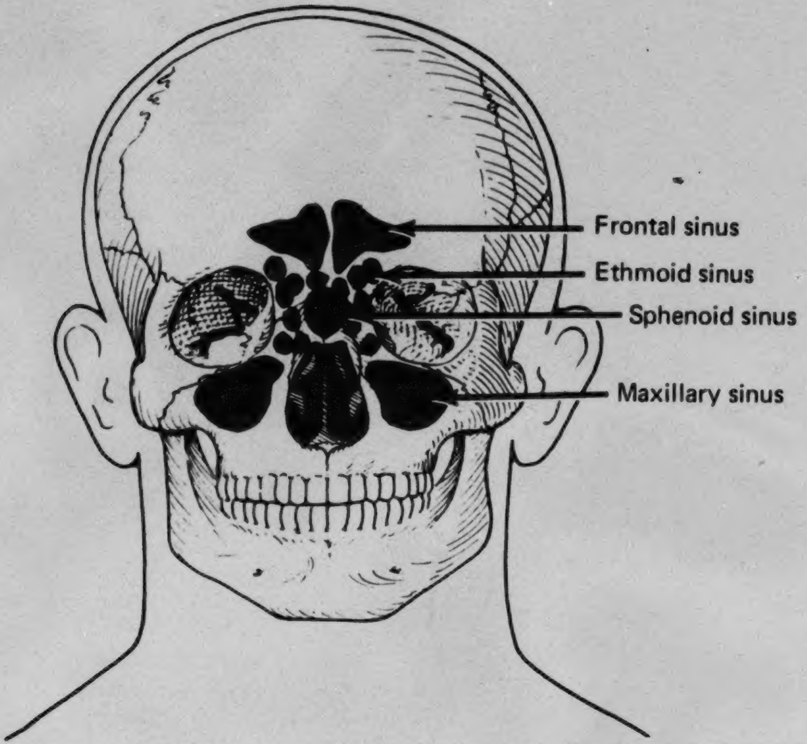
Example 1


ULNA
Process
Notch
Process
RADIUS
Head
Tuberosity
Foramen
Process
Process
Head


FEMUR
Trochanter
Trochanter
Fossa
Condyles

INFORMATION SHEET

Example 2


Frontal sinus
Ethmoid sinus
Sphenoid sinus
Maxillary sinus

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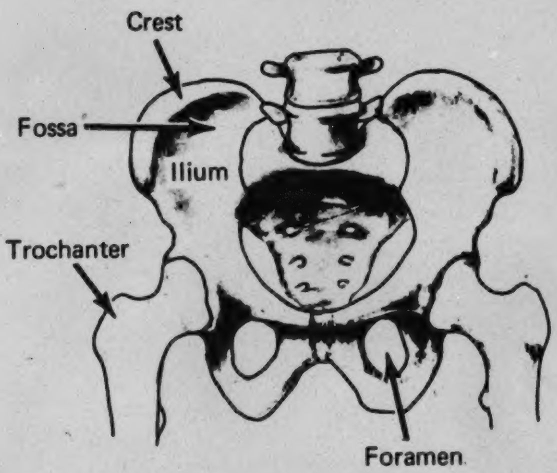
Example 3


Crest
Fossa
Ilium
Trochanter
Foramen

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INFORMATION SHEET

XIX. Divisions of the skeleton

- A. Axial skeleton--Bony framework of the head and trunk

  (NOTE: This includes 80 bones.)

  1. Skull
  2. Vertebrae
  3. Ribs and sternum

- B. Appendicular skeleton--Framework of the extremities

  (NOTE: This includes 126 bones.)

  1. Upper extremities
  2. Lower extremities

XX. Bones of the skull (Transparencies 2 and 3)

- A. Cranium

  (NOTE: The cranial bones join by way of sutures.)

  1. Frontal
  2. Parietal
  3. Temporal
  4. Sphenoid
  5. Occipital
  6. Styloid process

- B. Facial

  (NOTE: There are many small bones inside the skull and processes or points that articulate with other bones.)

  1. Mandible
  2. Maxillary
  3. Zygomatic
  4. Nasal

INFORMATION SHEET

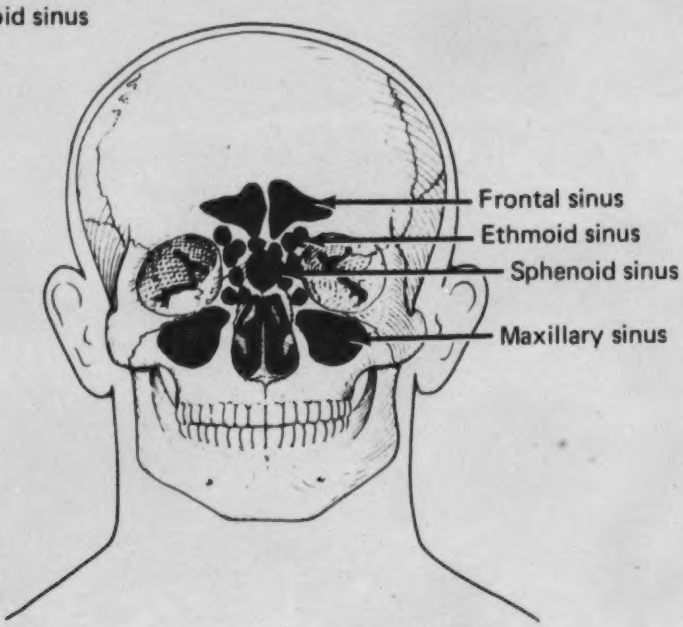
XXI. Sinuses found in the skull

A. Frontal sinus

B. Sphenoid sinus

C. Maxillary sinus

D. Ethmoid sinus



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XXII. Regions of the spinal column (Transparency 4)

(NOTE: For easy reference, the vertebrae are numbered and used in charting.)

Example: Injury extends from T4-L4

A. Cervical

(NOTE: This region is made up of seven vertebrae. A fracture in any of these vertebrae can be very dangerous because of the delicate spinal cord encased in the bones. In the average adult, the spinal cord ends somewhere between the first and second lumbar vertebrae.)

B. Thoracic

(NOTE: This region contains 12 bones and has 12 pairs of ribs attached to the column.)

INFORMATION SHEET

C. Lumbar

(NOTE: This area is made up of five vertebrae.)

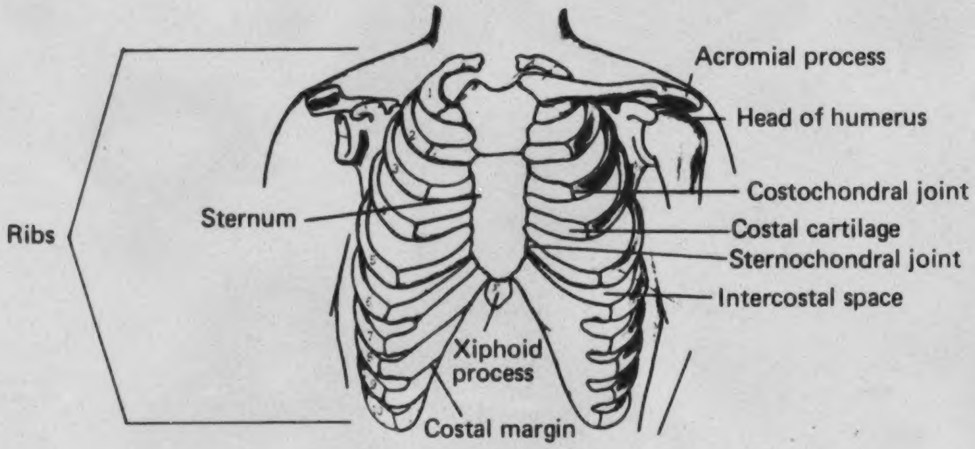
D. Sacral (sacrum)

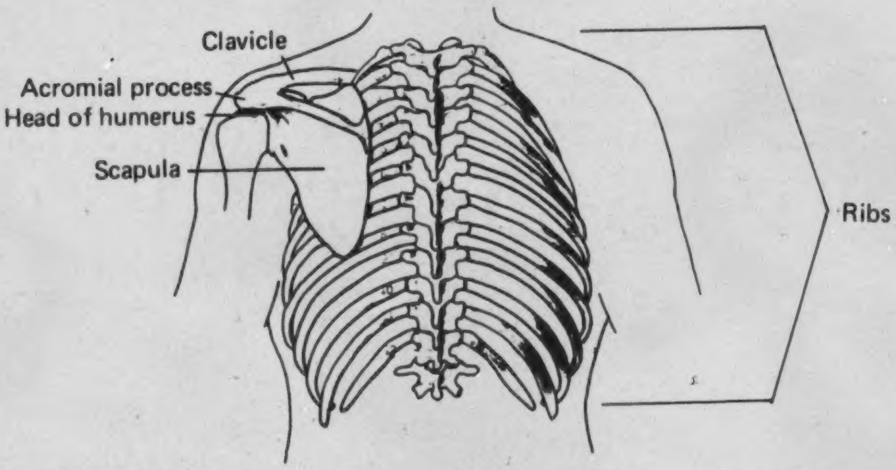
(NOTE: The child has five sacral bones which eventually join into one by adulthood.)

E. Coccygeal (coccyx)

(NOTE: The child has four or five coccygeal bones which eventually join into one by adulthood.)

XXIII. Bones of the chest, upper back, and shoulder


Acromial process
Head of humerus
Costochondral joint
Costal cartilage
Sternochondral joint
Intercostal space
Ribs
Sternum
Xiphoid process
Costal margin


Clavicle
Acromial process
Head of humerus
Scapula
Ribs

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INFORMATION SHEET

XXIV. Names of the ribs

(NOTE: There are 12 pairs of ribs, named according to their anterior attachments.)

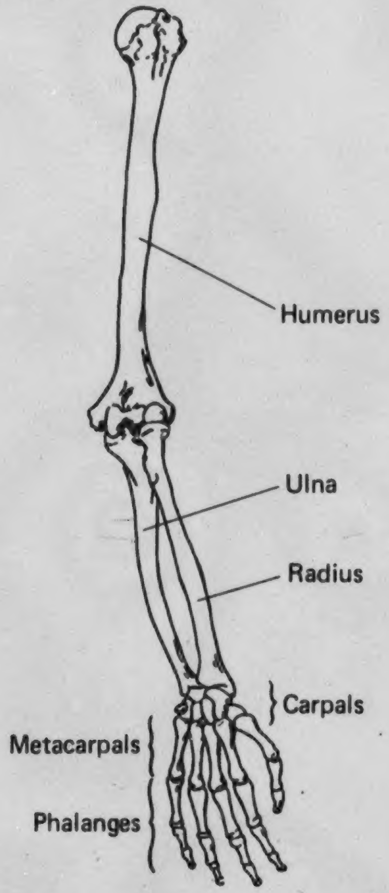
A. True ribs--Upper seven; articulate directly with the sternum

B. False ribs--Lower five pairs; join the sternum indirectly or not at all

C. Costal cartilages--Eighth, ninth, and tenth rib pairs; attach to the cartilage of the rib above

D. Floating ribs--Eleventh and twelfth ribs; anterior ends are completely unattached

XXV. Bones of the arm and hand



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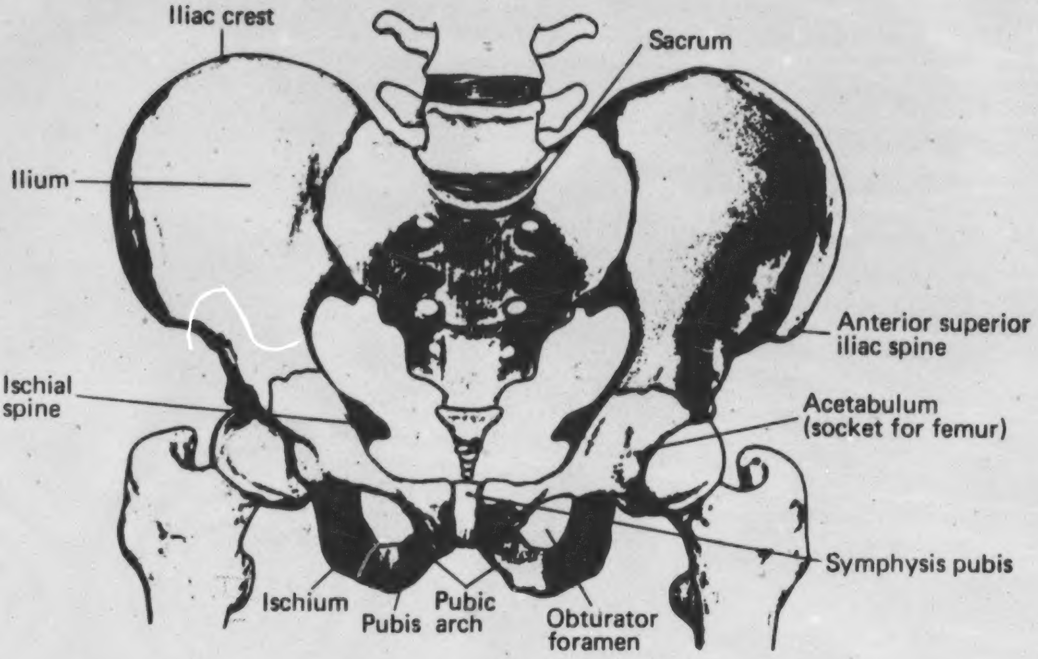
INFORMATION SHEET

XXVI. Bones of the pelvis


Iliac crest
Sacrum
Ilium
Anterior superior iliac spine
Ischial spine
Acetabulum (socket for femur)
Symphysis pubis
Ischium
Pubis
Pubic arch
Obturator foramen

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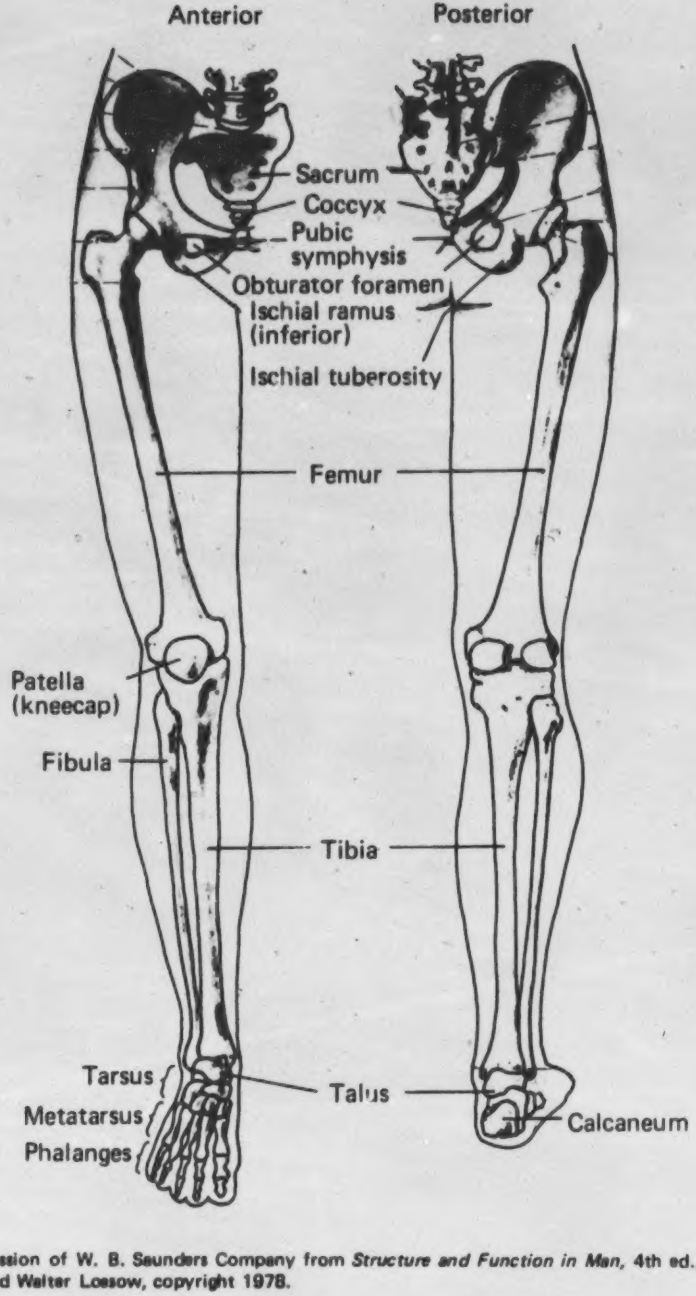
XXVII. Bones of the leg


Anterior
Posterior
Sacrum
Coccyx
Pubic symphysis
Obturator foramen
Ischial ramus (inferior)
Ischial tuberosity
Femur
Patella (kneecap)
Fibula
Tibia
Tarsus
Metatarsus
Phalanges
Talus
Calcaneum

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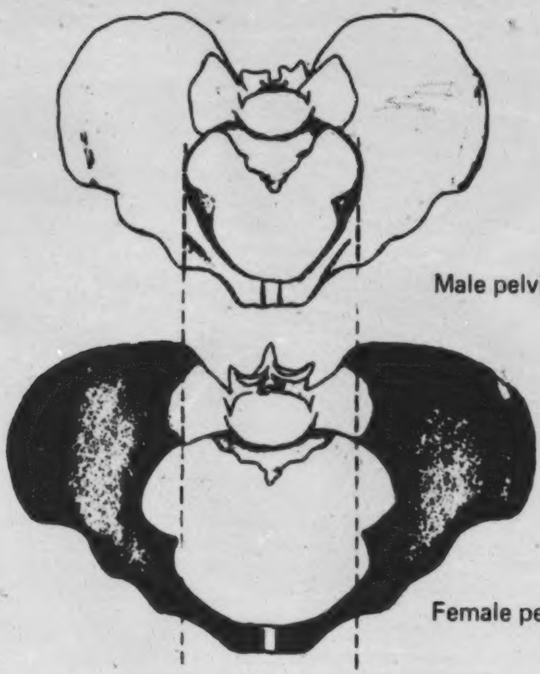
INFORMATION SHEET

XXVIII. Male (android) and female (gynecoid) pelvis

(NOTE: Female pelvis is shallower and more broad, lighter in weight, and more flexible.)



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XXIX. Classifications of joints according to the amount of movement

A. Immovable with no joint cavities (synarthrosis)

1. Skull sutures
2. Epiphyseal cartilage of the long bones

B. Slightly movable (amphiarthrosis)

1. Vertebral discs
2. Symphysis pubis
3. Sacroiliac joints

INFORMATION SHEET

C. Freely movable (diathrosis; also called *synovial joints*.)

   1. Shoulder joints
   2. Elbow, wrist, and finger joints
   3. Knee and ankle joints

XXX. Types of freely movable joints (Transparencies 5, 6, and 7)

(NOTE: Joints may move by flexion, extension, abduction, adduction, rotation, supination, and pronation, just as the muscles are able to move.)

A. Ball and socket joints

   1. Head of one bone fits into a cup-like socket of another bone
   2. Movement takes place in all planes, plus rotation

   Examples: Hip and shoulder joints

B. Hinge joints

   1. Spool-shaped surface fits into a concave surface
   2. Movement consists of flexion and extension and is limited by structure of the joint and by ligaments

   Examples: Joints of elbows, fingers, knees, and toes

C. Pivot joints

   1. Arch-shaped surface surrounds a peg-like pivot
   2. Only movement is rotation

   Examples: First vertebra rotates upon the second; radius rotates on the ulna in the elbow

D. Gliding joints

   1. One body surface glides upon another
   2. No angular or rotary movement

   Examples: Intervertebral joints; small bones of wrist and ankle

INFORMATION SHEET

XXXI. Growth of bones

A. At birth, bones are soft cartilage and gradually mature and grow in size

B. As bones mature, calcium phosphate is deposited in the cartilage and long fibers

C. Large amounts of calcium, phosphorus, and Vitamin D are required for bone growth

D. To prevent bones from becoming completely solid, an orderly tearing-down process takes place at all times in the medullary cavity

E. Every bone has an inner space for bone marrow

1. To manufacture blood cells
2. To aid in the nourishment of the bone itself
3. To prevent the bone from being too heavy

XXXII. Terms associated with patient movement

A. Contracture--Abnormal shortening of a muscle, tendon, or scar tissue, producing deformity or distortion which may become permanent

(NOTE: Contractures may begin to form within a week with fibrosis occurring in connective tissue. The fibrosis is difficult to correct or treat and may cause permanent deformities.)

B. Popliteal space--Pertaining to the posterior surface of the knee

C. Orthopnea--Respiratory condition in which breathing is possible only when the person sits or stands in an erect position

D. Paralysis--Loss or impairment of the ability to move parts of the body

E. Postural hypotension--Low blood pressure which occurs upon assuming an erect position or upon prolonged standing

F. Dependent edema--Abnormal accumulation of fluid in the tissues, affecting most severely the lowermost portions of the body

Example: Edema of the feet, ankles, and legs

G. Hypostatic pneumonia--Lung inflammation caused by constantly remaining in the same position

INFORMATION SHEET

XXXIII. Ways in which exercise promotes functioning of the patient's body (Transparency 8)

A. Preserves strength, tone, and elasticity of the muscles

B. Helps prevent contractures

C. Relieves areas of pressure

D. Stimulates appetite

E. Aids in elimination

F. Helps maintain blood pressure, efficient circulation, and efficient respiration

(NOTE: This will aid in preventing blood clots and pneumonia.)

G. Reduces fatigue

XXXIV. Factors which alter mobility

A. Loss or decrease through disease or injury

Examples: Paralysis, loss of consciousness

B. External conditions

Examples: Cast on leg, traction, use of equipment, such as respirator or heart monitor

C. Voluntary response

Example: Temporary emotional or social instability, responding to a temporary illness or pain

XXXV. Effects of immobility

A. Atrophy of muscles

B. Decrease of joint mobility

C. Softening of the bony tissue

D. Impairment of nerve function

E. Changes in sensory function

F. Changes in behavior

G. Decreased strength of respiratory muscles

INFORMATION SHEET

H. Changes in heart and circulatory functions

(NOTE: Some changes may be increased heart rate, postural hypotension, dependent edema, formation of thrombi or emboli, or hypostatic pneumonia.)

I. Changes in metabolism

(NOTE: These may include increased excretion of nitrogen or calcium, increased incidence of kidney stones, urinary retention, or constipation.)

J. Changes in condition of skin and underlying tissues

(NOTE: Changes may be due to difficulty in maintaining cleanliness and integrity of skin, to increased pressure on tissues, or to inadequate nourishment of the tissues.)

XXXVI. Nursing measures to prevent or decrease effects of immobility (Job Sheets #4, #5, #6, #7, and #8)

A. Proper alignment of body--Natural body position and alignment aid in prevention of malfunctions

B. Changing position--Relieves pressure, relocates internal secretions, and promotes muscle and joint movement

C. Joint mobility exercises--Patient should be assisted when needed and encouraged to exercise

D. Environmental structuring--Introduction of variety into the patient's environment to prevent boredom and provide interest

XXXVII. Devices used for the therapeutic comfort of the patient confined to bed (Transparency 9, Job Sheet #2)

A. Mattress variations

(NOTE: Follow manufacturer's instructions on how to make the type of bed you are using.)

Examples: Foam--Made of foam rubber

Split--Usually made of foam, with a short center section which can be removed to insert a bedpan

Alternating pressure mattress--Areas of the mattress are alternately inflated and deflated by a small motor so there is a continual change of pressure upon the patient's body

(**CAUTION**: Mattress is made of plastic and is easily punctured by sharp instruments, such as pins.)

Water or gel-filled--Plastic, filled with water or thick jelly-like substance

(**CAUTION**: Avoid puncturing.)

INFORMATION SHEET

B. Cradle

C. Footboard or footblock

D. Bedboard or fracture board

E. Balkan or overhead frame

F. Bradford frame

G. Air rings or cushions

H. Elbow or heel protectors

I. Sponge rubber pads or small pillows

J. Sandbags

K. Sheepskin

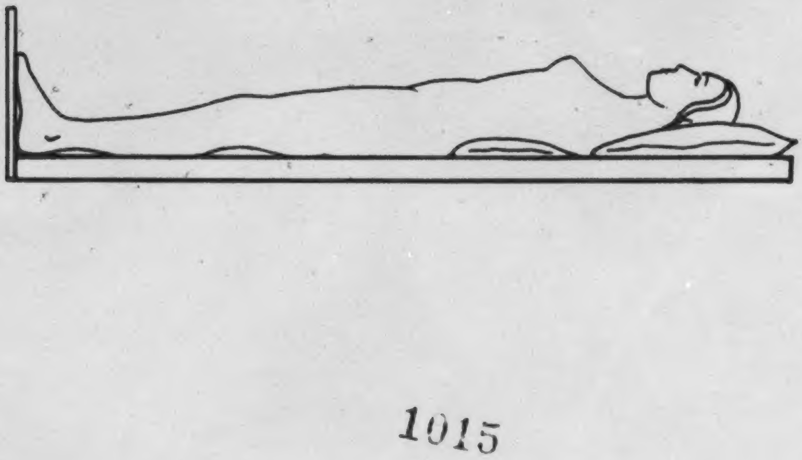
L. Alternating pressure mattress

M. Flotation pads

N. Egg-crate mattress

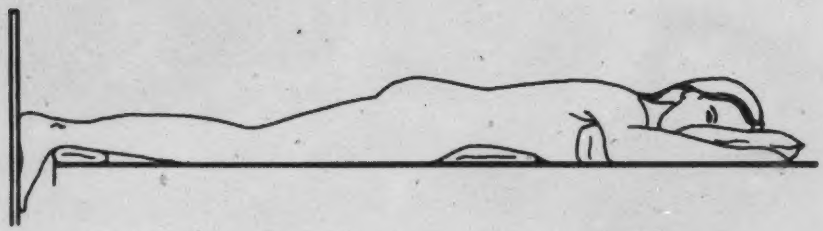
XXXVIII. Various body positions (Job Sheet #1)

A. Horizontal recumbent or supine

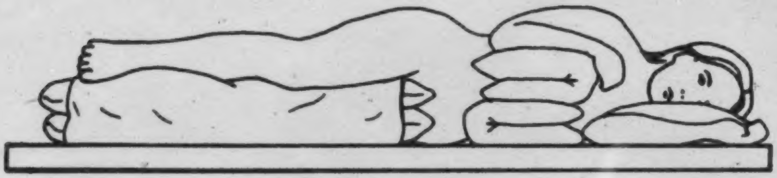


INFORMATION SHEET

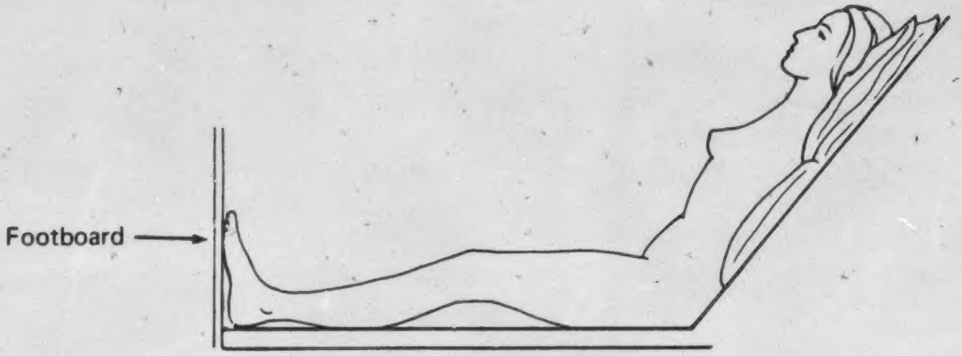
B. Prone



C. Lateral



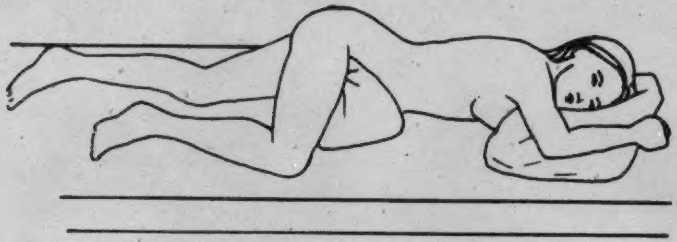
D. Fowler's



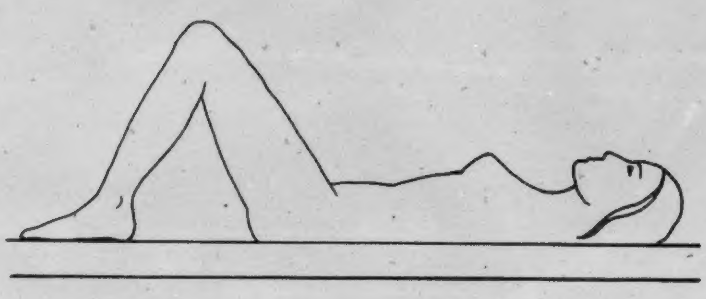
(NOTE: Hips should bend where the mattress bends.)

INFORMATION SHEET

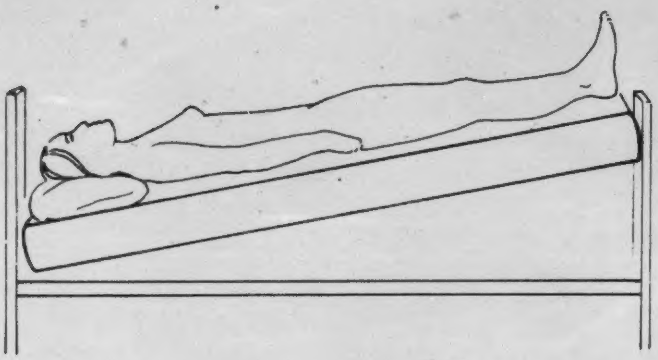
E. Sim's or semi-prone



F. Dorsal recumbent

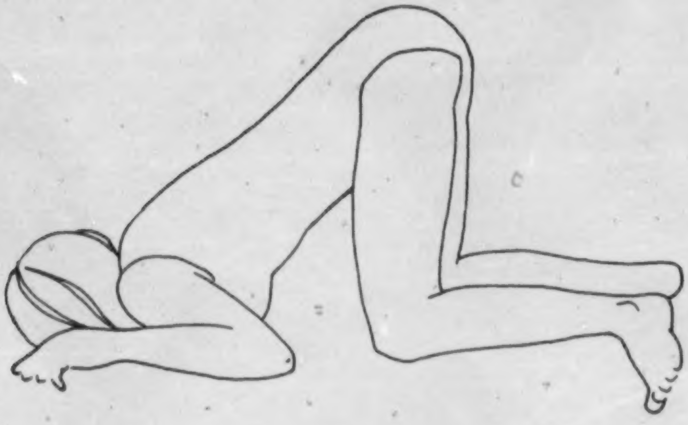


G. Trendelenburg

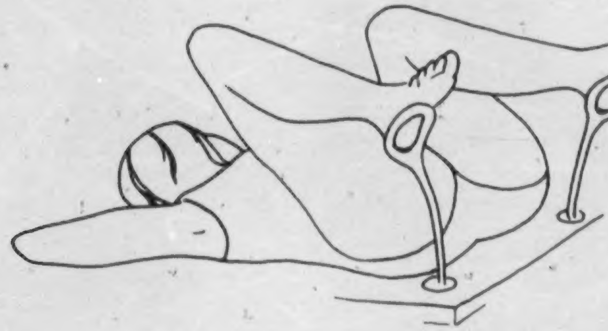


INFORMATION SHEET

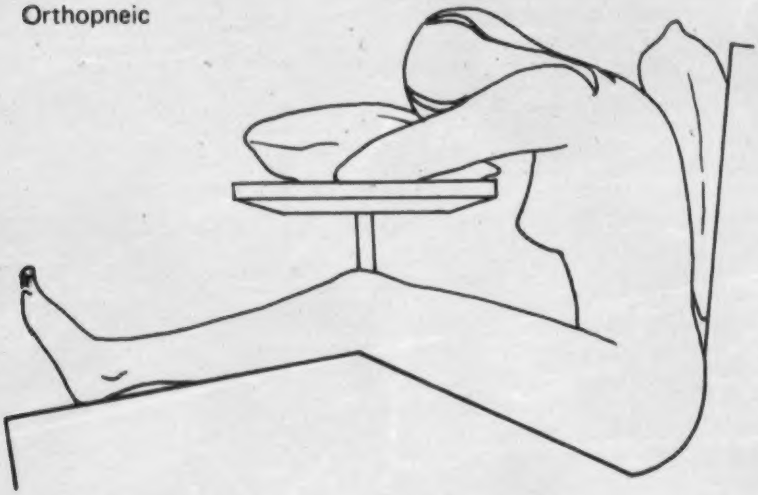
H. Knee-chest



I. Lithotomy



J. Orthopneic



INFORMATION SHEET

XXXIX. Common safety devices used for patients confined to bed (Job Sheet #3)

A. Side rails

(NOTE: Side rails are used to keep patients from falling out of bed and to assist patients in moving and turning. Since policies concerning use of side rails vary greatly, check with the person in charge about their use.)

B. Safety jacket-chest restraint

(NOTE: These jackets are used for confused or disturbed patients to prevent them from trying to get out of bed.)

C. Wrist, arm, or leg restraints

(NOTE: These restraints may be used to remind a patient not to move a part during treatment or administration of an intravenous infusion. When used to restrain a patient in bed, extra care is needed to change patient's position and to see that circulation is not hampered.)

D. Mittens

(NOTE: Mittens may be used to prevent a patient from removing dressings, catheters, or other treatment devices.)

XL. Precautions to observe when using devices that restrict movement

A. When side rails are being used, go no further than an arm's length from the bed without raising the side rails

B. Make the patient as comfortable as possible with good body alignment before applying any restraining device

C. Pad all restraining appliances carefully to avoid pressure and chafing; watch to see that the padding does not slip out of place

D. Loosen restraining devices every two hours and change patient's position

E. Watch circulation of the restrained limbs closely; circulation may be impaired if the limb is restrained improperly or too tightly

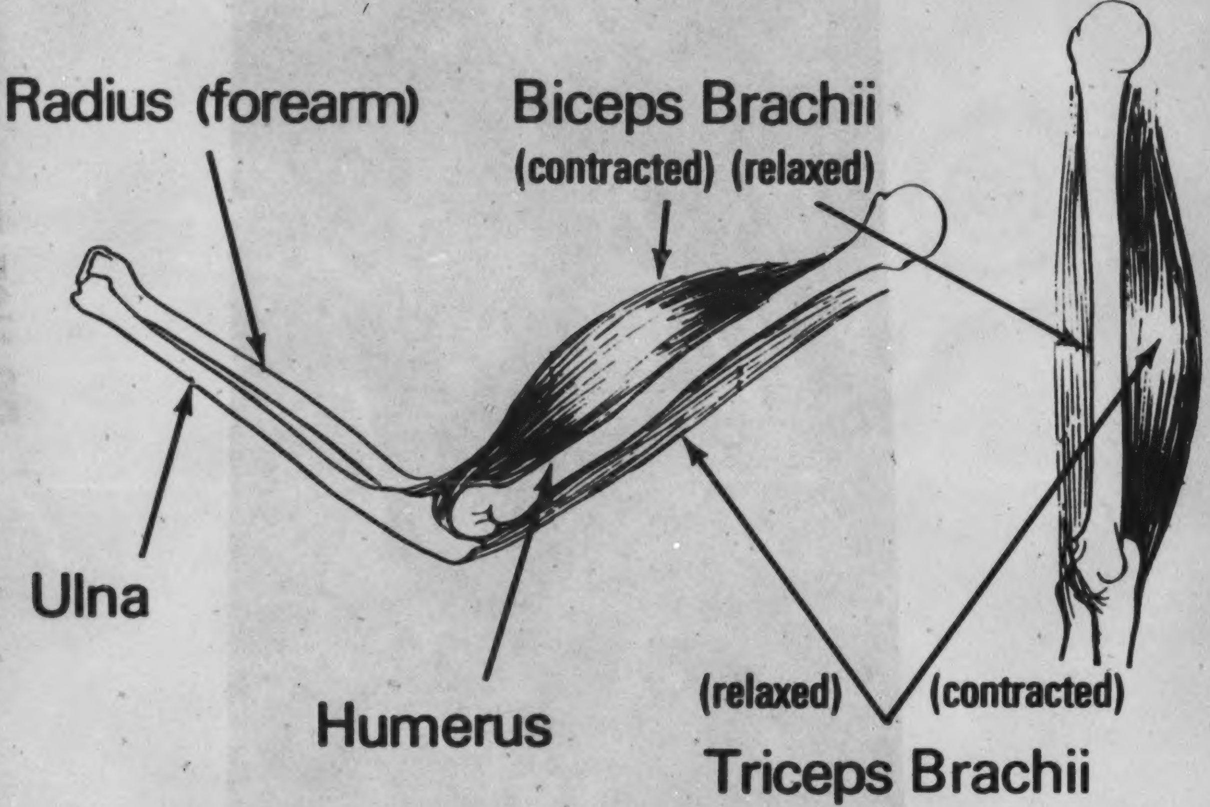
F. Check pulse and respirations frequently to see that respirations and circulation are not hampered

G. When lock-type restraints are used, the keys must be kept in a designated place readily available to personnel

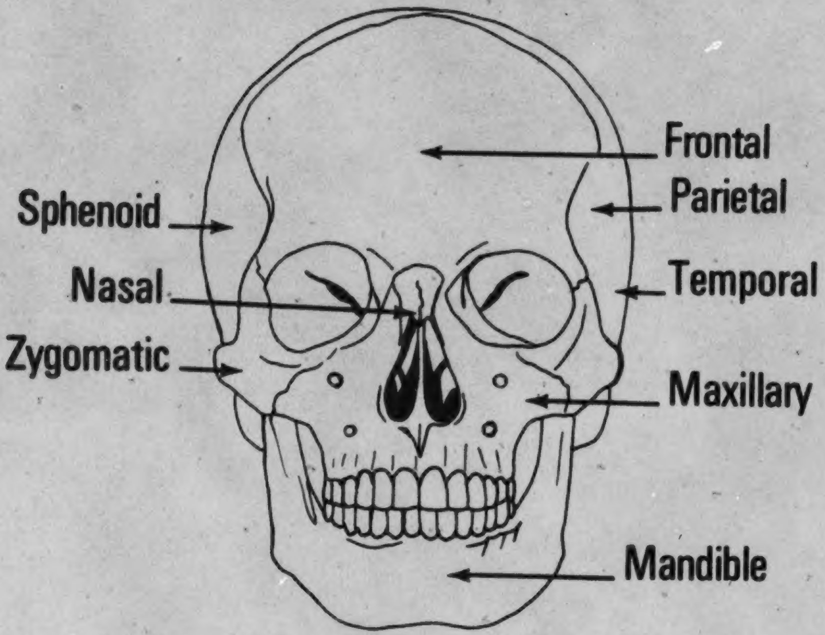
H. In most institutions, restraining devices are used upon the order of the attending physician or when, in the judgment of the charge nurse, they become necessary

(NOTE: If restraints are necessary, then clear documentation in the chart should show why they were needed [patient's behavior and reaction, and frequent notes on how it was tolerated] .)

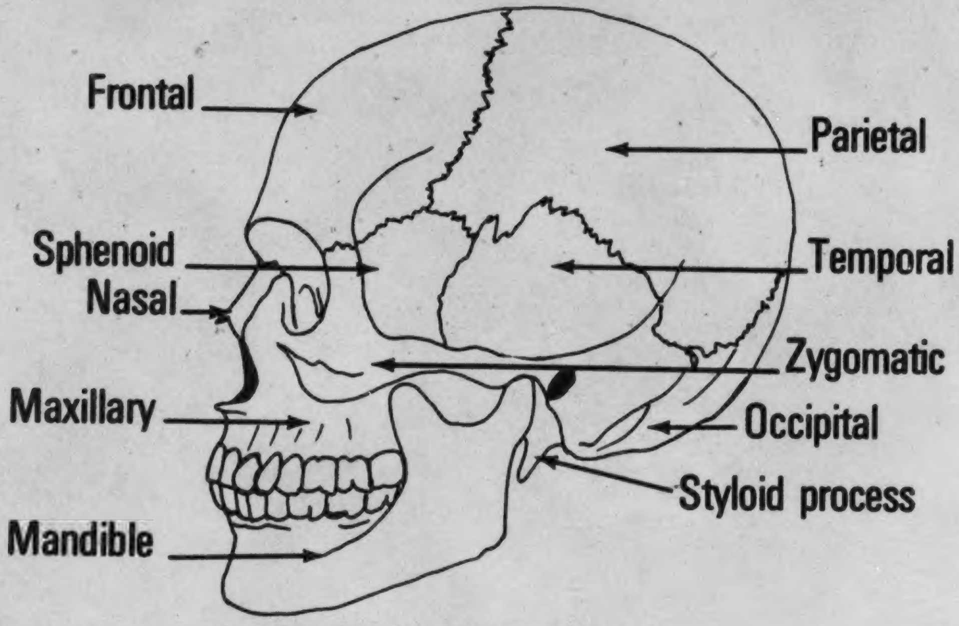
Coordinated Movement


Radius (forearm)
Biceps Brachii
(contracted) (relaxed)
Ulna
Humerus
(relaxed)
(contracted)
Triceps Brachii

Skeleton of Head


Frontal
Parietal
Sphenoid
Nasal
Temporal
Zygomatic
Maxillary
Mandible

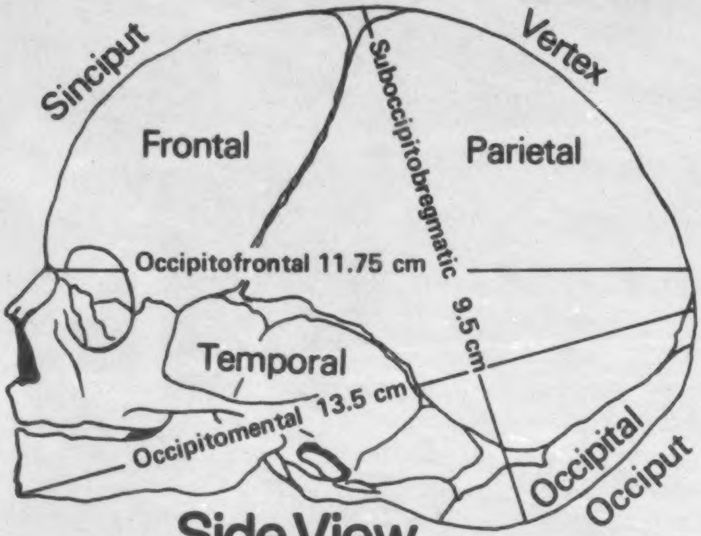
Front View


Frontal
Parietal
Sphenoid
Nasal
Temporal
Zygomatic
Maxillary
Occipital
Styloid process
Mandible

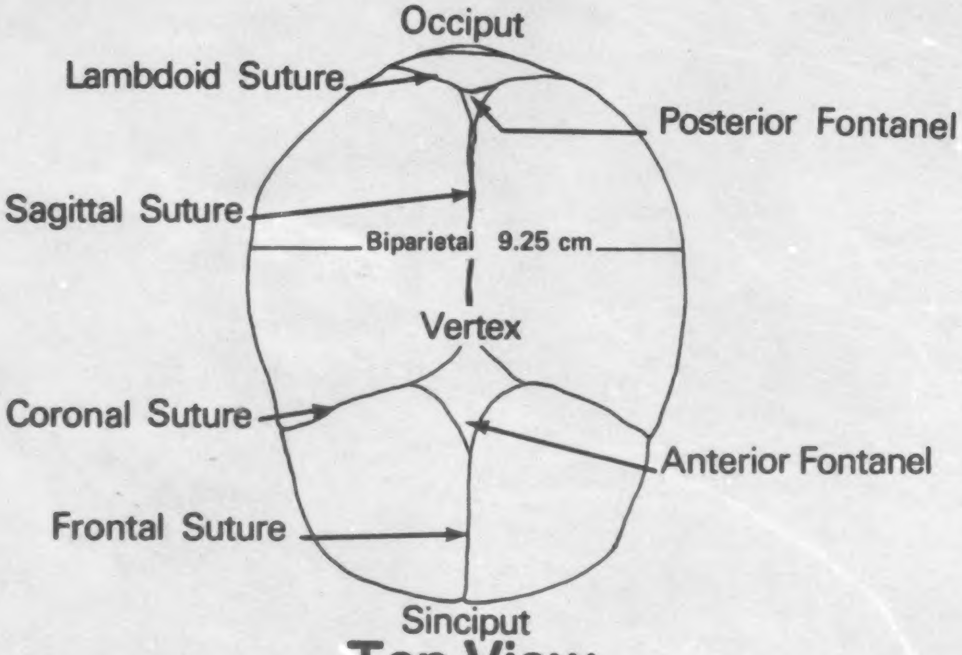
Side View

Used with permission of J.B. Lippincott Company from *The Human Body in Health and Disease*, 4th ed., by Ruth Lundeen Memmler and Dena Lin Wood, copyright 1977.

Skeleton of Head of Infant


Sinciput
Vertex
Frontal
Suboccipitobregmatic
Parietal
Occipitofrontal 11.75 cm
9.5 cm
Temporal
13.5 cm
Occipitomental
Occipital
Occiput

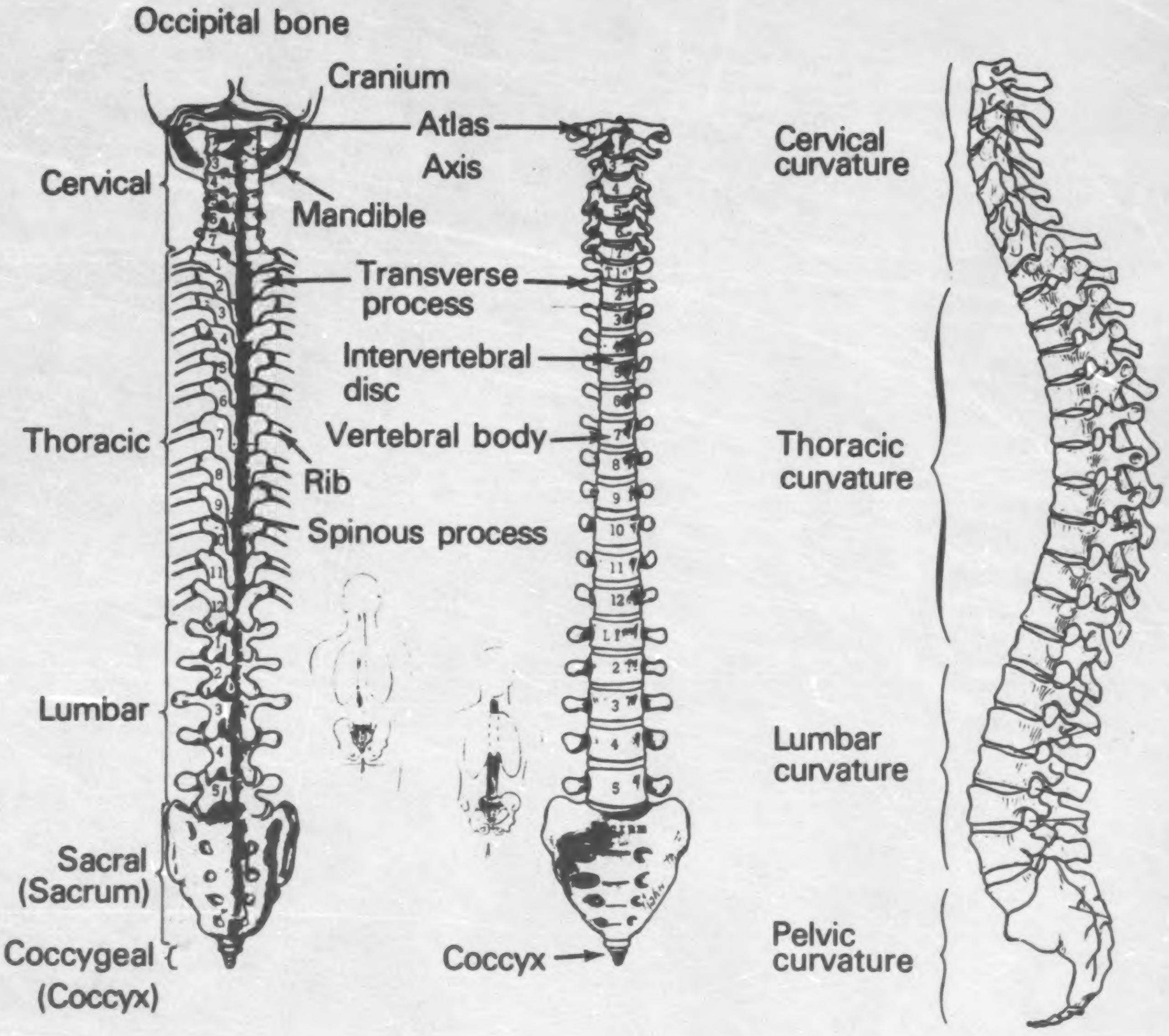
Side View


Occiput
Lambdoid Suture
Posterior Fontanel
Sagittal Suture
Biparietal 9.25 cm
Vertex
Coronal Suture
Anterior Fontanel
Frontal Suture
Sinciput

Top View

Adapted with permission of Ross Laboratories

The Spinal Column

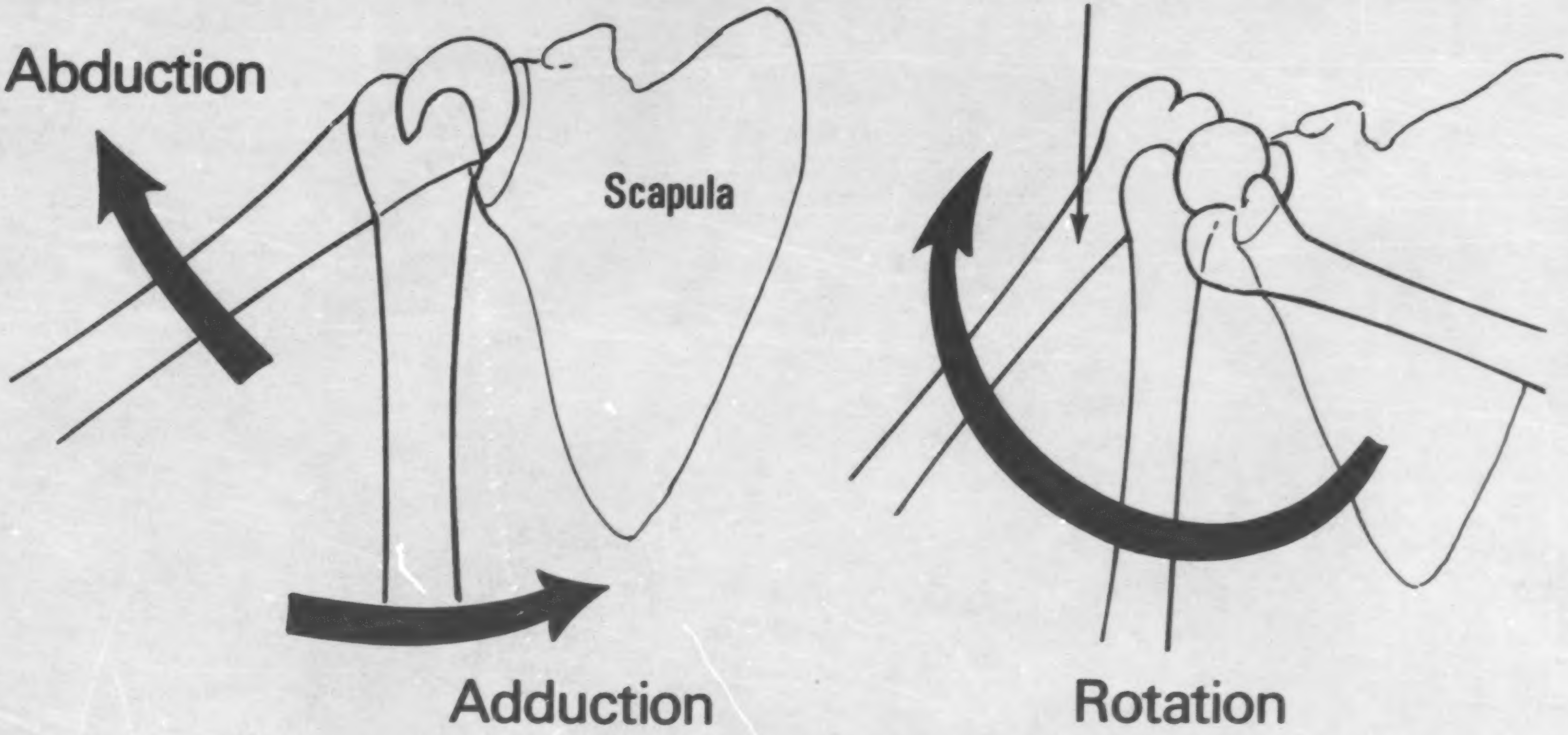

Occipital bone
Cranium
Atlas
Axis
Cervical
Mandible
Transverse process
Intervertebral disc
Vertebral body
Thoracic
Rib
Spinous process
Lumbar
Sacral (Sacrum)
Coccygeal (Coccyx)
Coccyx
Cervical curvature
Thoracic curvature
Lumbar curvature
Pelvic curvature

Posterior **Anterior** **Side View**

Adapted with permission of W. B. Saunders Company from *Structure and Function in Man,* 4th ed., by Stanley Jacob, Clarice Francone, and Walter Lossow, copyright 1978; and with permission of Wm. C. Brown Company Publishers from *Human Anatomy and Physiology,* 2nd ed., by John W. Hole, Jr., copyright 1981.

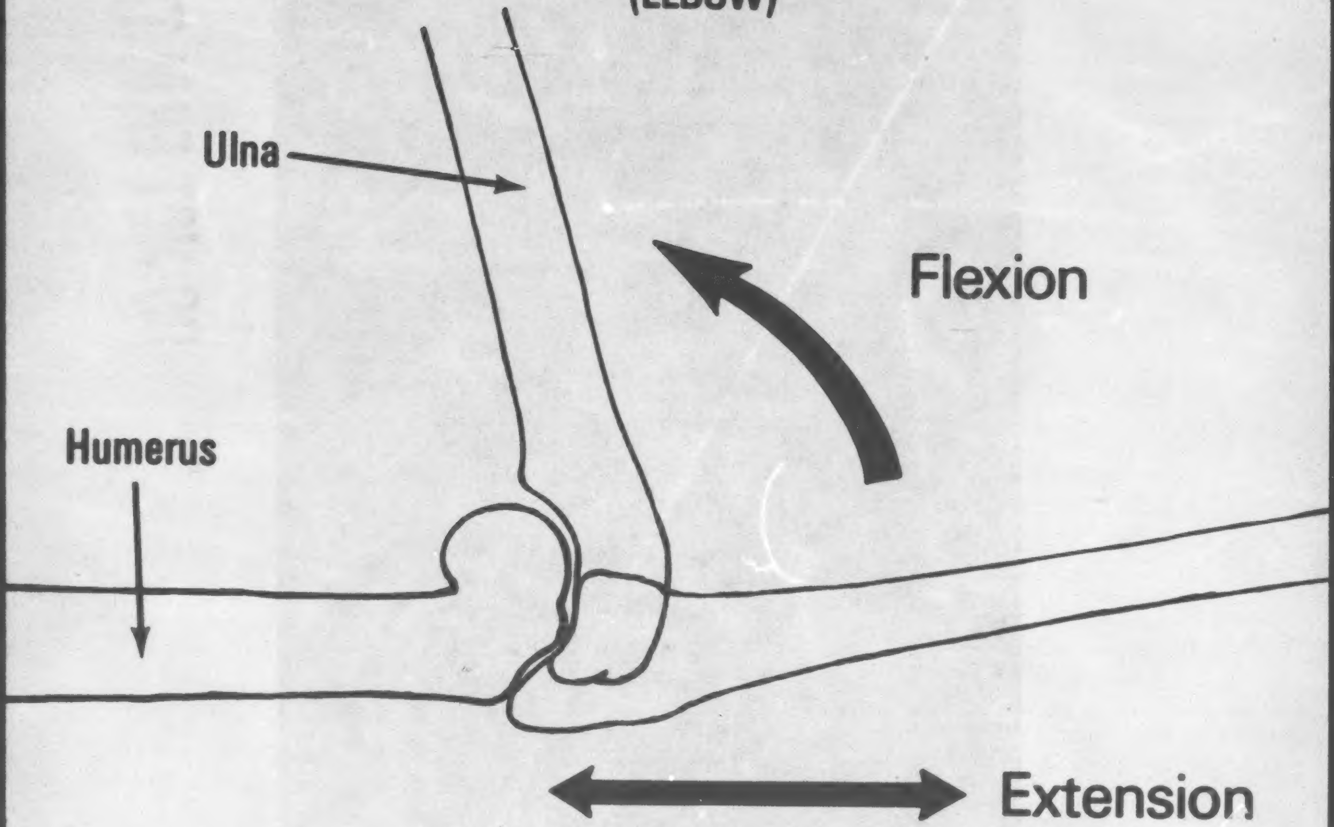
Ball and Socket Joint

(SHOULDER)


Abduction
Scapula
Humerus
Adduction
Rotation

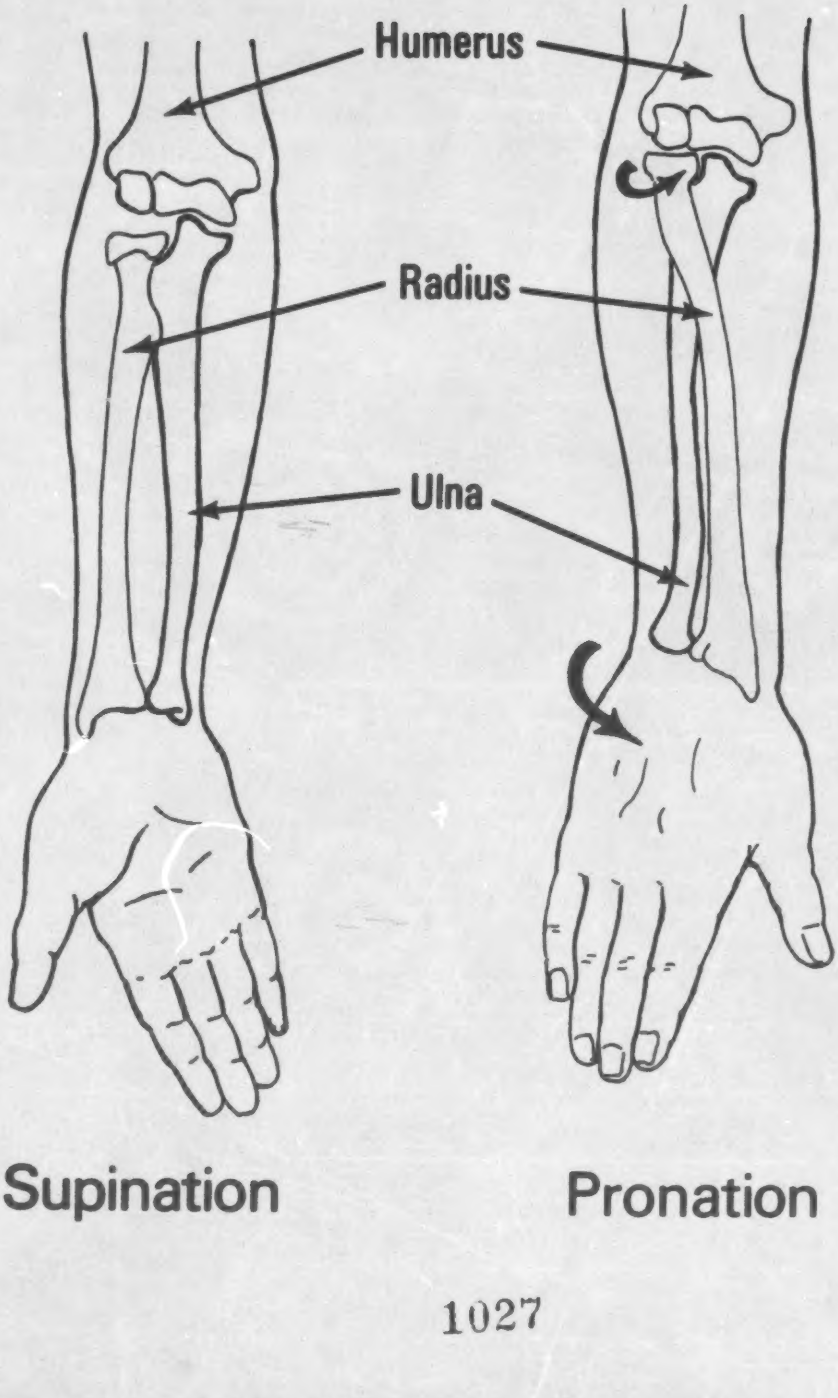
Hinge Joint

(ELBOW)


Ulna
Flexion
Humerus
Extension

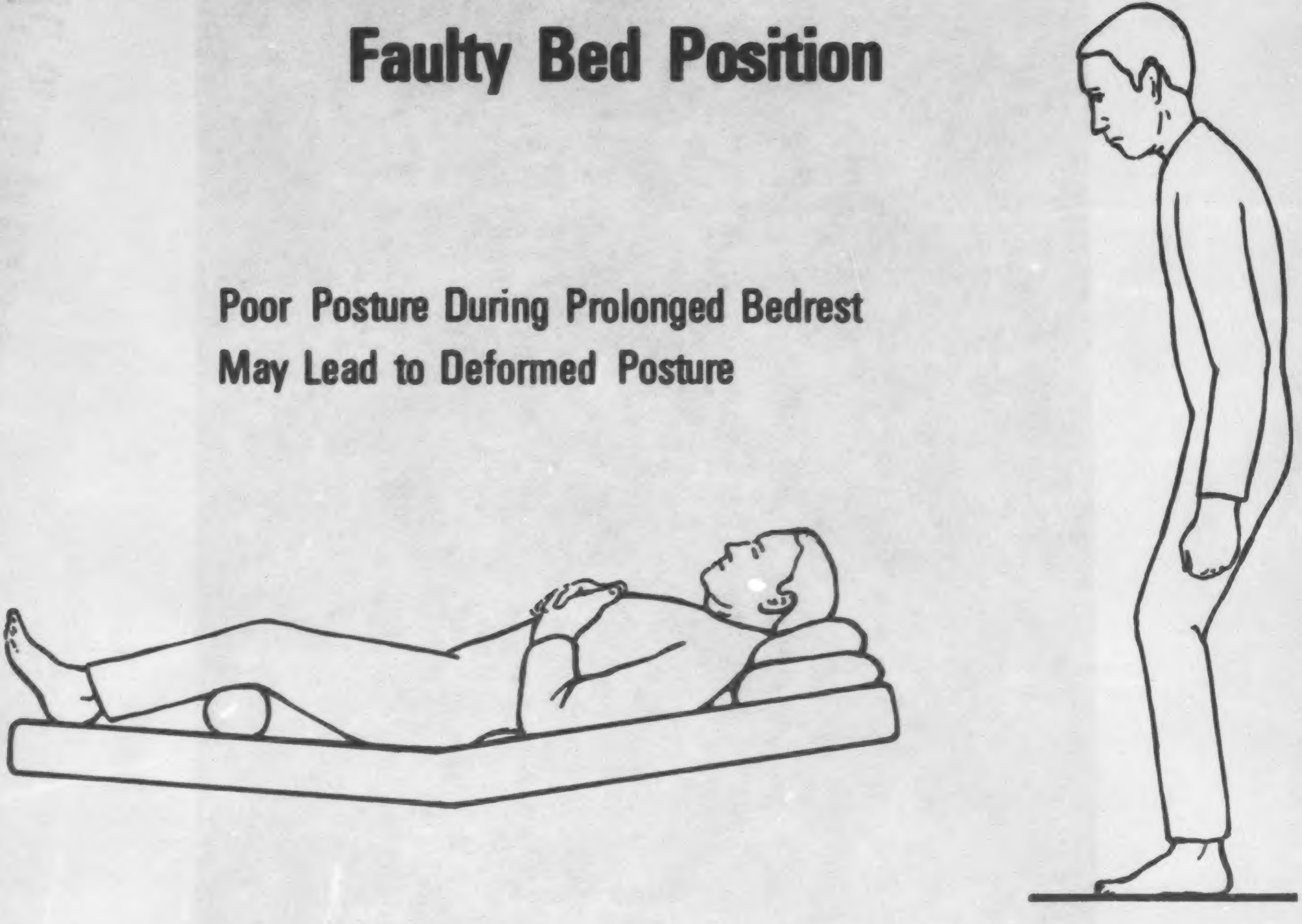
Pivot Joint

(ELBOW)


Humerus
Radius
Ulna
Supination
Pronation

Contractures Due to Faulty Bed Position

Poor Posture During Prolonged Bedrest
May Lead to Deformed Posture



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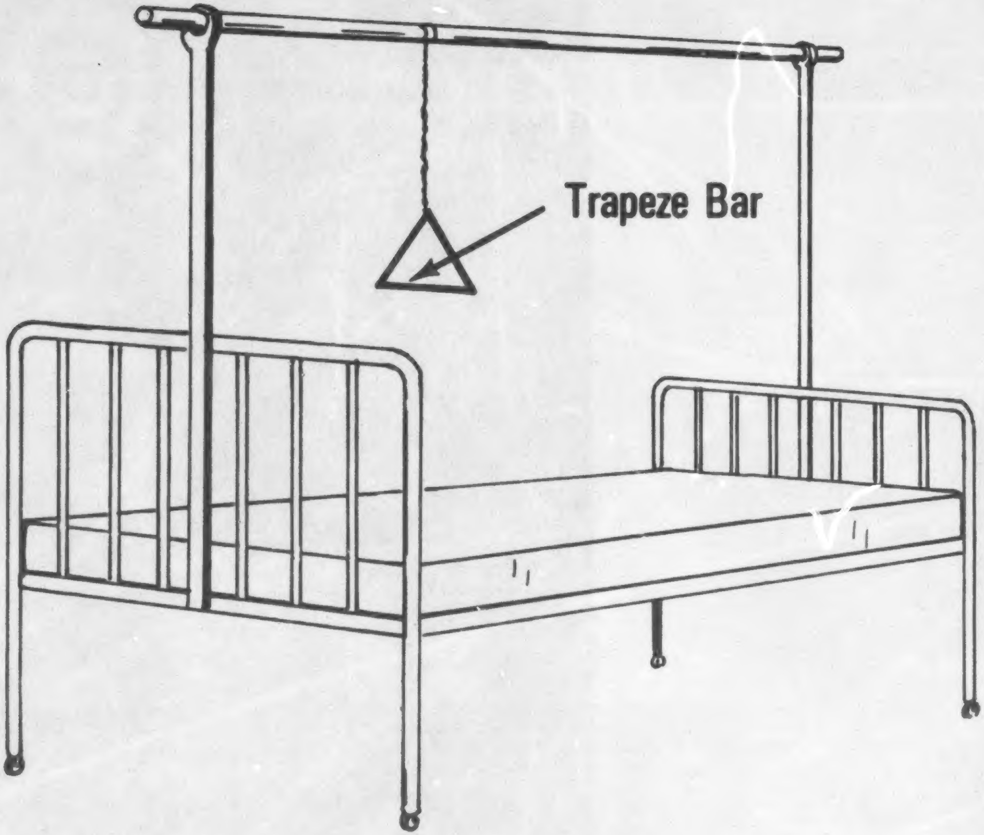
One Type of Overhead Frame


Trapeze Bar

MUSCULOSKELETAL SYSTEM AND PATIENT MOVEMENT
UNIT VII

ASSIGNMENT SHEET #1--ASSESS MOBILITY

NAME ______________________ SCORE ______________

If you practice good observation skills, you can begin to assess your patient's musculoskeletal system and the patient's ability to move as soon as he or she enters the hospital. Even before the patient disrobes or answers questions for a more in-depth assessment, you can observe major characteristics or symptoms that will give you needed information.

Select a patient to assess and fill in the following comment areas, using as much detail as possible. If some areas do not apply to your patient, write non-applicable in the space. The more often you perform assessments and record your findings, the more comfortable you will become with the process.

1. Method of transport

   (NOTE: In many hospitals it is a policy that the patient arrive and be discharged by wheelchair. You may need to take this into consideration before using this characteristic to assess patient's mobility.)

   Examples: Arrived by wheelchair, carrier; walked with or without assistance

   COMMENTS: ______________________

   ____

2. Posture

   Examples: Very erect, stooped; has curvature of spine in the lumbar area

   COMMENTS: ______________________

   ____

3. Gait or method of walking

   Examples: Limps with left leg; walks very slowly; sways from side to side; walks awkwardly by leaning forward on toes

   COMMENTS: ______________________

   ____

4. Symmetry of body (correspondence in shape, size, and position of parts of body)

   Examples: Arm or leg smaller than the other, one leg shorter than the other

   COMMENTS: ______________________

   ____

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ASSIGNMENT SHEET #1

5. Edema of an extremity

Example: Large amount of swelling of right leg, ankle, and foot

COMMENTS: ______________________________

____

6. Joint size/color

Examples: Swelling, nodule, or knots on or around the joint; redness around the joint

COMMENTS: ______________________________

____

7. Use of additional equipment for movement

Examples: Walker, cane, crutches

COMMENTS: ______________________________

____

8. Has prosthesis (artificial limb)

COMMENTS: ______________________________

____

MUSCULOSKELETAL SYSTEM AND PATIENT MOVEMENT
UNIT VII

JOB SHEET #1--POSITION THE PATIENT

I. Equipment needed

   A. Bed, made as for an occupied bed

   B. Pillows, as needed

   C. Footrest or footboard

   D. Extra linens, such as towels or bath blankets to use for support

   E. Sandbags, as needed

   F. Handrolls

II. Procedure

   A. Horizontal recumbent or supine position (Figure 1)

      1. Place pillow under shoulder and head

      2. Place folded towel or small, firm pillow under lower back

         (NOTE: Pillow is placed under natural curve of patient's back. Check by putting hand under patient's back to determine placement.)

      3. Maintain slight flexion of knees by using a small folded towel just superior to the popliteal space or use the bed's knee gatch

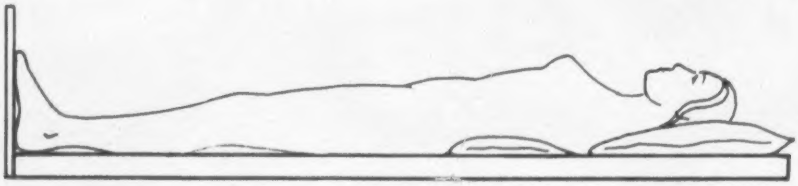
         (**CAUTION**: Do **not** use towel under the knee as it can cause pressure and pooling of blood.)

      4. Support feet with footrest or covered box to prevent plantar flexion

      5. If necessary, use rolled towels or sandbags at lateral aspects of thighs to prevent outward rotation of the legs

      6. Check that bedcovers over feet are loosened to prevent plantar flexion when footrest is not used

FIGURE 1



JOB SHEET #1

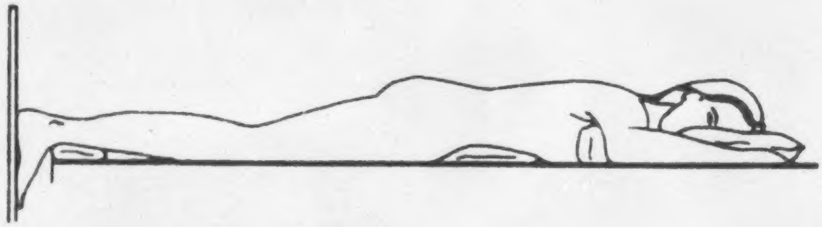
7. Use handrolls and support arms with pillows, as needed, to prevent contractures

B. Prone position (Figure 2)

1. Move patient to one side of bed
2. Turn patient onto side facing center of bed
3. Place small pillow below breasts for female patient; place small pillow under lower abdomen for male patient
4. Turn patient onto abdomen
5. Position arms
    a. Arm at back of head lies parallel to body with elbow flexed slightly
    b. Arm at face side is flexed at right angle
6. Place small pillow under patient's head, if desired
7. Place pillow under ankles to keep weight of legs off toes

   (NOTE: Patient may be positioned so feet hang off edge of mattress. Use small folded linen under ankles to relieve strain.)

FIGURE 2



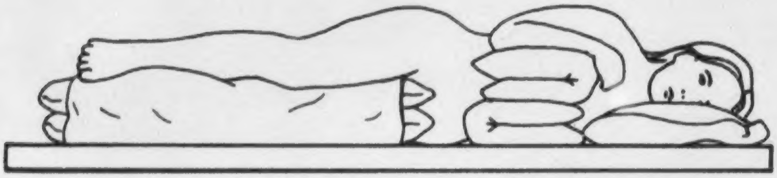
C. Lateral position (Figure 3)

1. Turn patient onto side and move near center of bed
2. Fold a pillow lengthwise and tuck along patient's back to keep patient from rolling backward
3. Place small pillow under patient's head
4. Flex upper leg to comfortable position; leave lower leg or flex slightly as desired for comfort
5. Place folded blanket or firm pillow under upper leg and foot

JOB SHEET #1

6. Flex lower arm at right angle at shoulder and elbow
7. Place folded pillow under upper arm

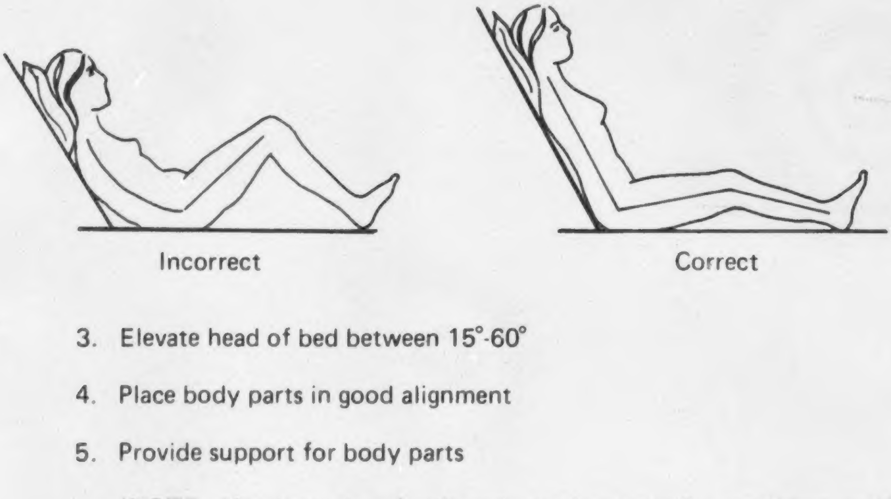
FIGURE 3



D. Fowler's position (Figure 4)

1. Place patient in supine position
2. Check to see that bend of hips is at bend of mattress

FIGURE 4



3. Elevate head of bed between 15°-60°
4. Place body parts in good alignment
5. Provide support for body parts

   (NOTE: Use knee-rest, footboard, trochanter rolls, sandbags, and/or pillows to support and maintain position.)

6. Loosen bedcovers over feet if footrest is not used

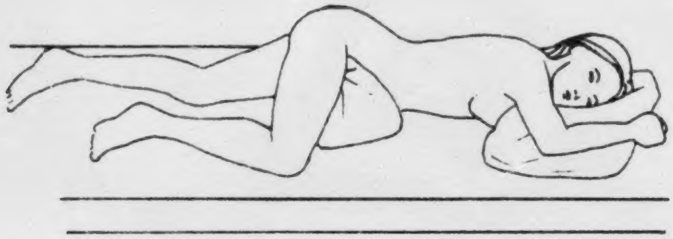
E. Sims' or semi-prone position (Figure 5)

1. Turn patient on side
2. Place small pillow under head

JOB SHEET #1

3. Align body in good position
    a. Position head, neck, and back shoulder in a straight line
    b. Support and lift lower shoulder and flex lower arm behind patient
    c. Flex lower leg slightly
4. Flex uppermost leg and support with pillow under knee, lower leg, and ankle
5. Flex upper arm and support with pillow, as needed

FIGURE 5



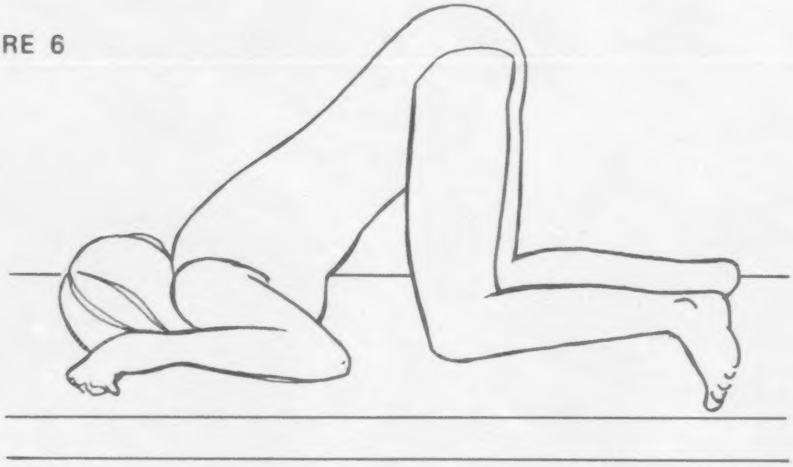
F. Knee-chest position (Figure 6)

1. Turn patient onto abdomen
2. Replace top covers with bath blanket
3. Fanfold, keeping top covers down with lower legs covered
4. Help patient into kneeling position with chest and head resting on bed

JOB SHEET #1

5. Tuck bath blanket around patient's thighs, leaving center free to be raised during examination

FIGURE 6

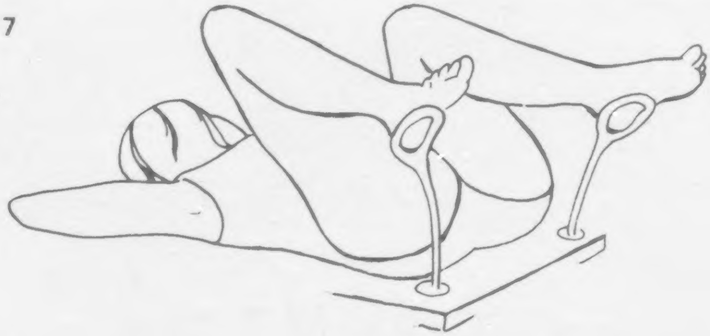


G. Lithotomy position (Figure 7)

1. Place patient in supine position
2. Replace top covers with bath blanket
3. Flex patient's hips while abducting them
4. Flex knees acutely
5. Tuck bath blanket corners around patient's feet and legs, leaving center free to be raised during examination

   (NOTE: If position is to be maintained for any length of time, it may be necessary for two people to support patient's legs in the proper position.)

FIGURE 7



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JOB SHEET #1

III. Checklist for positioning the patient

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ____________________		
B.	To place patient in horizontal recumbent or supine position; placed pillow under shoulder and head	☐	☐
	Comments: ____________________		
C.	Placed folded towel or small, firm pillow under lower back	☐	☐
	Comments: ____________________		
D.	Maintained slight flexion of knees by using a small folded towel just superior to the popliteal space or used the bed's knee gatch	☐	☐
	Comments: ____________________		
E.	Supported feet with footrest or covered box to prevent plantar flexion	☐	☐
	Comments: ____________________		

JOB SHEET #1

		Performed well	Needs improvement
F.	If necessary, used rolled towels or sandbags at lateral aspects of thighs to prevent outward rotation of legs	☐	☐
	Comments: ____________________		
G.	Checked that bedcovers over feet were loosened to prevent plantar flexion when footrest was not used	☐	☐
	Comments: ____________________		
H.	Used handrolls and supported arms with pillows, as needed, to prevent contractures	☐	☐
	Comments: ____________________		
I.	To place patient in prone position; moved patient to one side of bed	☐	☐
	Comments: ____________________		
J.	Turned patient onto side facing center of bed	☐	☐
	Comments: ____________________		

JOB SHEET #1

		Performed well	Needs improvement
K.	Placed small pillow below breasts for female patient; placed small pillow under lower abdomen for male patient	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
L.	Turned patient onto abdomen	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
M.	Placed patient's arm at back of head parallel to body with elbow flexed slightly; arm at face side was flexed at right angle	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
N.	Placed small pillow under patient's head, if desired	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
O.	Placed pillow under ankles to keep weight of legs off toes	☐	☐

Comments: ____________________

____

____

JOB SHEET #1

		Performed well	Needs improvement
P.	To place patient in lateral position; turned patient onto side and moved near center of bed	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
Q.	Folded a pillow lengthwise and tucked along patient's back to keep patient from rolling backward	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
R.	Placed small pillow under patient's head	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
S.	Flexed upper leg to comfortable position; left lower leg or flexed slightly as desired for comfort	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
T.	Placed folded blanket or firm pillow under upper leg and foot	☐	☐

Comments: ____________________

____

____

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JOB SHEET #1

		Performed well	Needs improvement
U.	Flexed lower arm at right angle at shoulder and elbow	☐	☐
	Comments:		
V.	Placed folded pillow under upper arm	☐	☐
	Comments:		
W.	To place patient in Fowler's position; placed patient in supine position	☐	☐
	Comments:		
X.	Checked to see that bend of hips was at bend of mattress	☐	☐
	Comments:		
Y.	Elevated head of bed between 15°-60°	☐	☐
	Comments:		

JOB SHEET #1

		Performed well	Needs improvement
Z.	Placed body parts in good alignment	☐	☐
	Comments: ________________ ________________ ________________		
AA.	Provided support for body parts	☐	☐
	Comments: ________________ ________________ ________________		
BB.	Loosened bedcovers over feet if footrest was not used	☐	☐
	Comments: ________________ ________________ ________________		
CC.	To place patient in Sim's or semi-prone position; turned patient on side	☐	☐
	Comments: ________________ ________________ ________________		
DD.	Placed small pillow under head	☐	☐
	Comments: ________________ ________________ ________________		

JOB SHEET #1

	Performed well	Needs improvement
EE. To align body in good position; positioned head, neck, and back shoulder in a straight line	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
FF. Supported and lifted lower shoulder and flexed lower arm behind patient; flexed lower leg slightly	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
GG. Flexed uppermost leg and supported with pillow under knee, lower leg, and ankle	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
HH. Flexed upper arm and supported with pillow, as needed	☐	☐

Comments: ______________________________

____

____

JOB SHEET #1

		Performed well	Needs improvement
II.	To place patient in knee-chest position; turned patient onto abdomen	☐	☐
	Comments:		
JJ.	Replaced top covers with bath blanket	☐	☐
	Comments:		
KK.	Fanfolded, keeping top covers down with lower legs covered	☐	☐
	Comments:		
LL.	Helped patient into kneeling position with chest and head resting on bed	☐	☐
	Comments:		
MM.	Tucked bath blanket around patient's thighs, leaving center free to be raised during examination	☐	☐
	Comments:		

JOB SHEET #1

		Performed well	Needs improvement
NN.	To place patient in lithotomy position; placed patient in supine position	☐	☐
	Comments:		
OO.	Replaced top covers with bath blanket	☐	☐
	Comments:		
PP.	Flexed patient's hips while abducting them	☐	☐
	Comments:		
QQ.	Flexed knees acutely	☐	☐
	Comments:		
RR.	Tucked bath blanket corners around patient's feet and legs, leaving center free to be raised during examination	☐	☐
	Comments:		

MUSCULOSKELETAL SYSTEM AND PATIENT MOVEMENT
UNIT VII

JOB SHEET #2--USE TURN SHEET

(NOTE: In many cases it is difficult for the patient to move in bed without assistance. The turn sheet can be utilized to turn or move a patient in the bed.)

I. Equipment--Cotton drawsheet used for turning patient

II. Procedure for turning patient to side

   A. Obtain assistance from co-worker

   B. Wash hands

   C. Collect cotton drawsheet

   D. Identify patient and explain procedure

   E. Unfold drawsheet

   F. Refold drawsheet in half, lengthwise

   (NOTE: Refold, removing all wrinkles until it forms a pad that is larger than patient's hips and upper thighs.)

   G. Fanfold half of turn sheet in from side

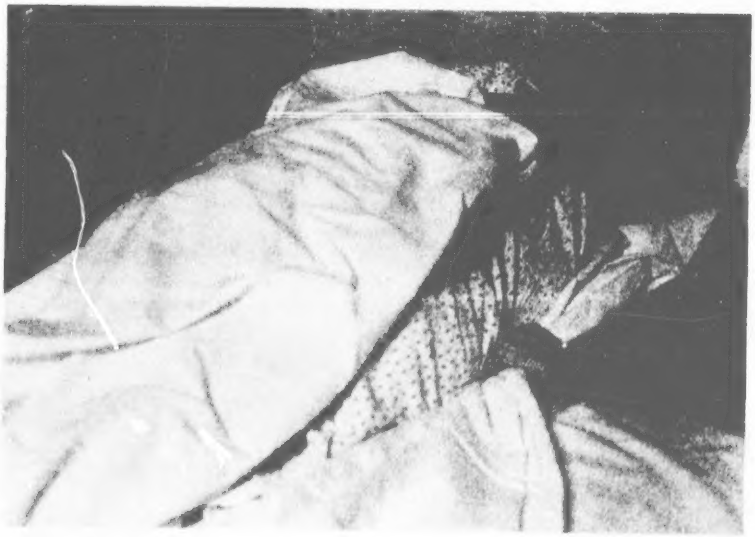
   H. Align center of turn sheet under patient's buttocks with the halfway mark even with the spine (Figure 1)

FIGURE 1

JOB SHEET #2

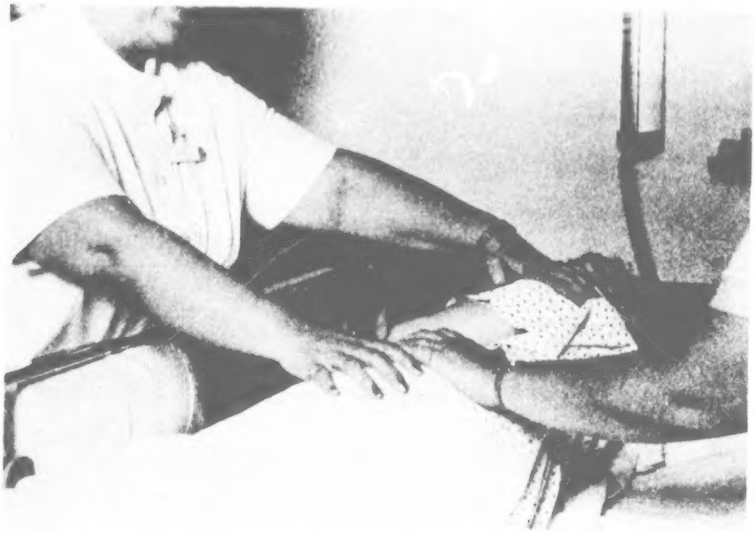
I. Turn patient to side to place sheet (Figure 2)

FIGURE 2



J. Turn patient to opposite side with the help of co-worker (Figure 3)

FIGURE 3

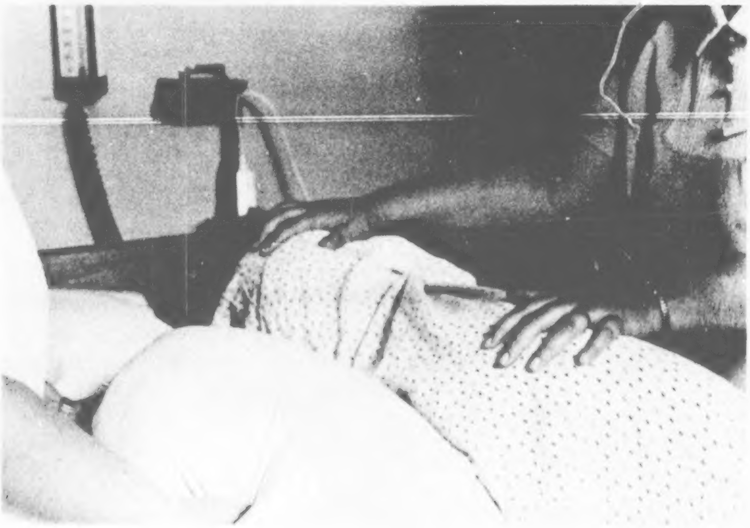


K. Ease the turn sheet under the patient until it is flat

JOB SHEET #2

L. Place pillows or rolled blanket for support (Figure 4)

FIGURE 4



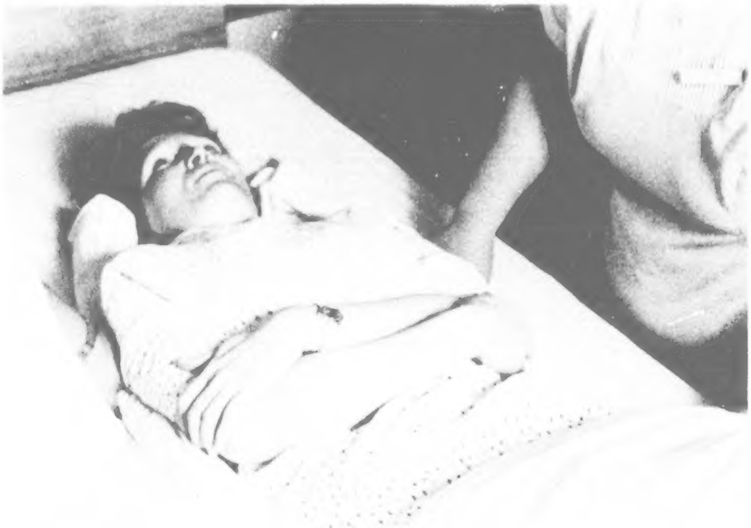
III. Procedure for moving patient up in bed

A. Follow above instructions for placing the turn sheet

B. Remove the pillow from behind the patient's head

C. Roll the turn sheet from both sides of the bed toward the patient (Figure 5)

FIGURE 5



JOB SHEET #2

D. Explain procedure to patient and have him or her assist if possible

(NOTE: Have patient bend knees. On a given count, using correct body mechanics, at the same time have patient push with feet as nurses lift patient up or down in the bed.)

E. Remove all wrinkles from under patient

F. Unroll turn sheet, making it flat

G. Lift patient's head and return pillow to proper place

H. Replace side rails and make patient comfortable

I. Put communication device within patient's reach

J. Record activities and patient's reaction

JOB SHEET #2

IV. Checklist for using turn sheet

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments:		
B. To turn patient to side, obtained assistance from co-worker	☐	☐
Comments:		
C. Washed hands; collected cotton drawsheet	☐	☐
Comments:		
D. Identified patient and explained procedure	☐	☐
Comments:		
E. Unfolded drawsheet	☐	☐
Comments:		

JOB SHEET #2

	Performed well	Needs improvement
F. Refolded drawsheet in half, lengthwise	☐	☐
Comments: ______________________		
G. Fanfolded half of turn sheet in from side	☐	☐
Comments: ______________________		
H. Aligned center of turn sheet under patient's buttocks with the half-way mark even with the spine	☐	☐
Comments: ______________________		
I. Turned patient to side to place sheet	☐	☐
Comments: ______________________		
J. Turned patient to opposite side with the help of co-worker	☐	☐
Comments: ______________________		

JOB SHEET #2

		Performed well	Needs improvement
K.	Eased the turn sheet under patient until it was flat	☐	☐
	Comments:		
L.	Placed pillows or rolled blanket for support	☐	☐
	Comments:		
M.	To move patient up in bed; followed instructions for placing turn sheet	☐	☐
	Comments:		
N.	Removed pillow from behind patient's head	☐	☐
	Comments:		
O.	Rolled turn sheet from both sides of the bed toward patient	☐	☐
	Comments:		

JOB SHEET #2

		Performed well	Needs improvement
P.	Explained procedure to patient and had him or her assist if possible	☐	☐
	Comments: ____________________		
Q.	Removed all wrinkles from under patient	☐	☐
	Comments: ____________________		
R.	Unrolled turn sheet, making it flat	☐	☐
	Comments: ____________________		
S.	Lifted patient's head and returned pillow to proper place	☐	☐
	Comments: ____________________		
T.	Replaced side rails and made patient comfortable	☐	☐
	Comments: ____________________		

JOB SHEET #2

		Performed well	Needs improvement
U.	Put communication device within patient's reach	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
V.	Recorded activities and patient's reaction	☐	☐

Comments: ______________________________

____

____

MUSCULOSKELETAL SYSTEM AND PATIENT MOVEMENT
UNIT VII

JOB SHEET #3--APPLY RESTRAINTS

(NOTE: Hopefully, restraints are used as a last resort in confining patient in bed or in chair. Restraints are applied when a patient needs extra security or support to keep from falling or moving from bed or chair or when incapable of moving on his or her own. Some patients are confused and will pull at tubes and dressings. Restraints will keep them from injuring themselves.)

I. Equipment

  A. Belts

  B. Wrist restraints

  C. Mittens

  D. Vest restraints

II. Procedure

  A. Belts (Figure 1)

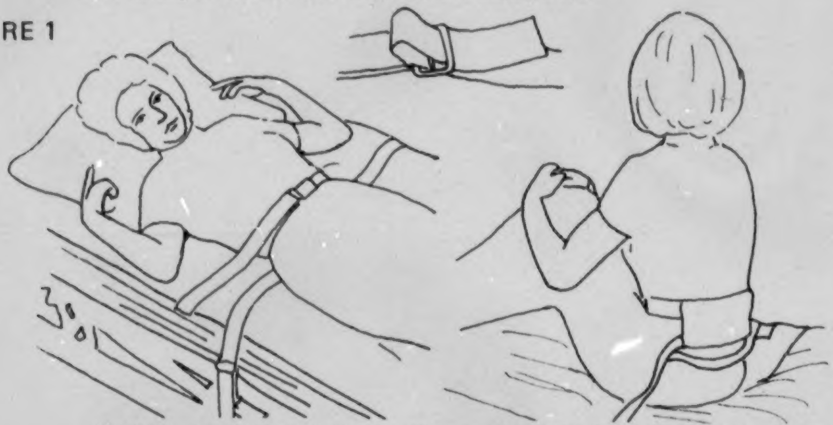
    1. Place flannel back pad in center of bed, approximately where patient's waist will be

    2. Anchor long bed straps to bed spring frame on both sides by encircling bed spring frame and passing through buckle

    3. Check to see that pad is in center of bed and that belts are secured with buckles up and waist belt toward head of bed

    4. Place patient on belt and secure waist belt

FIGURE 1



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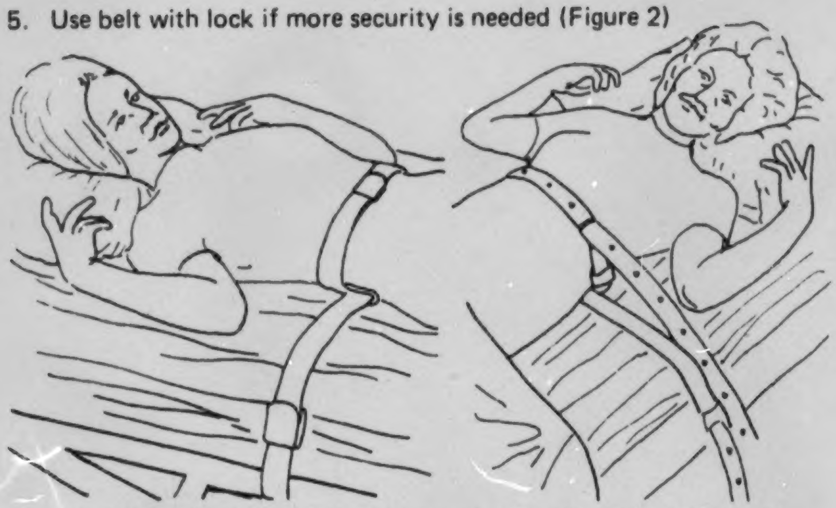
JOB SHEET #3

5. Use belt with lock if more security is needed (Figure 2)

FIGURE 2



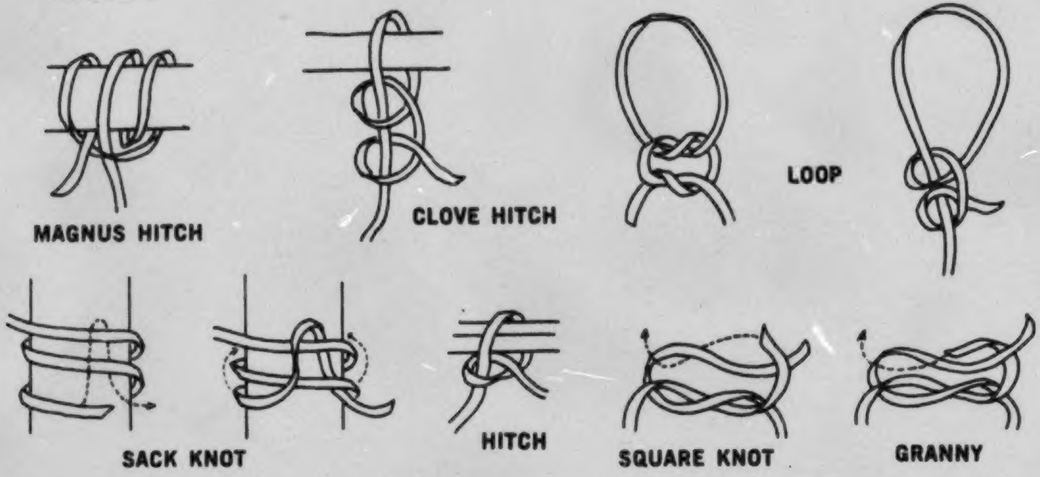
Used with permission of J. T. Posey Company from *The Posey Guide*, 1980, page 2.

(NOTE: Always know where key to restraint is kept, or keep it with you at all times.)

6. Test for proper fit by placing flat of hand between belt and waist

(NOTE: A variety of knots can be used to secure straps. Practice different knots that are secure but can be easily untied by health worker. See Figure 3.)

FIGURE 3


MAGNUS HITCH
CLOVE HITCH
LOOP
SACK KNOT
HITCH
SQUARE KNOT
GRANNY

Used with permission of J. T. Posey Company from *The Posey Guide*, 1980, page 3.

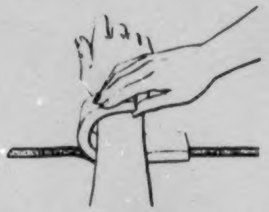
JOB SHEET #3

B. Wrist restraints

(NOTE: Restraints can be made by using gauze and a clove hitch knot.)

1. Place pad under limb with strap side of pad down
2. Wrap cushion of pad around limb, allowing retainer to remain loose (Figure 4)

FIGURE 4



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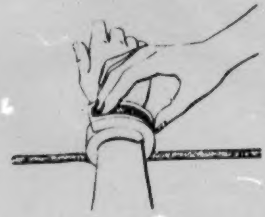
3. Wrap other end of pad around limb, making it secure but not too tight (Figure 5)

FIGURE 5



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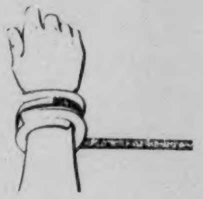
4. Place retainer over pad connector and press to attach; secure strap to spring frame (Figure 6)

FIGURE 6



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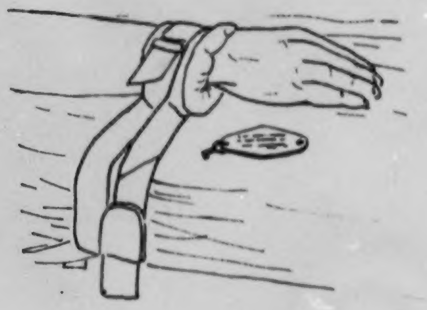
(NOTE: This restraint uses Velcro to adhere the pad.)

JOB SHEET #3

5. Use an extra security, fleece-padded restraint if needed (Figure 7)

FIGURE 7



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(NOTE: Ankle restraints are also available.)

C. Mittens

(NOTE: A mitten also can be made from stockinette and tape. These restraints are used to protect patients who may possibly injure themselves, preventing them from removing catheters, IV's, and dressings.)

1. Place hand in mitten and secure at wrist (Figure 8)
2. Secure to bed with straps around bed spring frame (Figure 9)

(NOTE: Mittens can be made from loosely woven net or cotton material and may have a rigid layer on the palm side.)

FIGURE 8

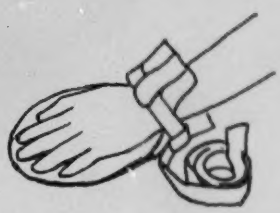
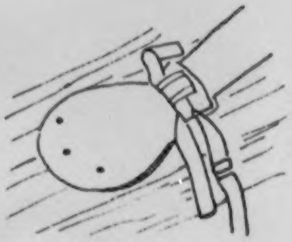


FIGURE 9



Used with permission of J. T. Posey Company from *The Posey Guide*, 1980, page 6.

D. Vest restraints

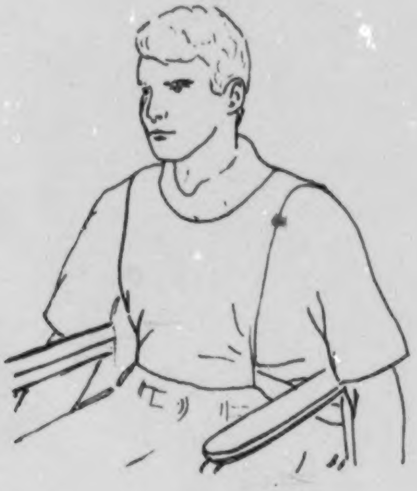
(NOTE: Vest restraints can be used in bed or in chair to give support and to secure safety.)

1. Secure patient in wheelchair by loosening waist strap and slip vest over the head

JOB SHEET #3

2. Draw waist belt to comfort and secure behind chair; slip loops over push handles (Figure 10)

FIGURE 10

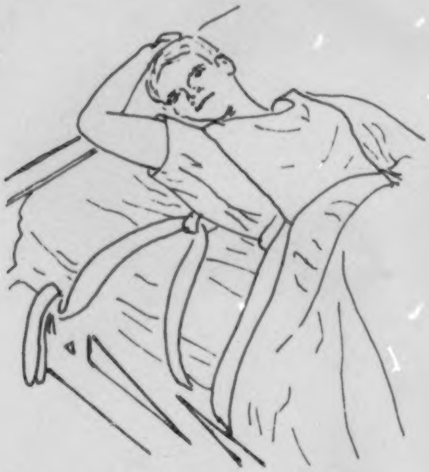


Used with permission of J. T. Posey Company from *The Posey Guide*, 1980, page 12.

3. Secure patient in bed by fastening ties at bed spring frame or under bed

4. Prevent patient from rolling or sitting up by wrapping waist belt around frame and back through shoulder loop; secure under bed (Figure 11)

FIGURE 11



Used with permission of J. T. Posey Company from *The Posey Guide*, 1980, page 12.

JOB SHEET #3

III. Checklist for applying restraints

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
B. To apply belts; placed flannel back pad in center of bed, approximately where patient's waist would be	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
C. Anchored long bed straps to bed spring frame on both sides by encircling bed spring frame and passing through buckle	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
D. Checked to see that pad was in center of bed and that belts were secured with buckles up and waist belt toward head of bed	☐	☐

Comments: ____________________

____

____

JOB SHEET #3

		Performed well	Needs improvement
E.	Placed patient on belt and secured waist belt	☐	☐
	Comments:		
F.	Used belt with lock if more security was needed	☐	☐
	Comments:		
G.	Tested for proper fit by placing flat of hand between belt and waist	☐	☐
	Comments:		
H.	To apply wrist restraints; placed pad under limb with strap side of pad down	☐	☐
	Comments:		
I.	Wrapped cushion of pad around limb, allowing retainer to remain loose	☐	☐
	Comments:		

JOB SHEET #3

		Performed well	Needs improvement
J.	Wrapped other end of pad around limb, making it secure but not too tight	☐	☐
	Comments: ________________________________		
K.	Placed retainer over pad connector and pressed to attach; secured strap to spring frame	☐	☐
	Comments: ________________________________		
L.	Used an extra security, fleece-padded restraint if needed	☐	☐
	Comments: ________________________________		
M.	To apply mittens; placed hand in mitten and secured at wrist	☐	☐
	Comments: ________________________________		
N.	Secured to bed with straps around bed spring frame	☐	☐
	Comments: ________________________________		

JOB SHEET #3

	Performed well	Needs improvement
O. To apply vest restraints; secured patient in wheelchair by loosening waist strap and slipped vest over head	☐	☐
Comments: ________________		
P. Drew waist belt to comfort and secured behind chair; slipped loops over push handles	☐	☐
Comments: ________________		
Q. Secured patient in bed by fastening ties at bed spring frame or under bed	☐	☐
Comments: ________________		
R. Prevented patient from rolling or sitting up by wrapping waist belt around frame and back through shoulder loop; secured under bed	☐	☐
Comments: ________________		

MUSCULOSKELETAL SYSTEM AND PATIENT MOVEMENT
UNIT VII

JOB SHEET #4--ASSIST PATIENT TO DANGLE

(NOTE: This procedure is usually performed as the initial getting-up activity for a patient who has been ill or had surgery. Patient may be apprehensive and fearful of pain. Watch for signs of weakness or syncope.)

I. In classroom with another student playing the part of a patient, assist to dangle

II. Procedure

  A. Wash hands

  B. Identify patient and explain procedure

  C. Check pulse

  D. Move patient to side of bed; if there is an injury or weakness, work from side near the weakness

  E. Place bed in low position

  F. Elevate head of bed to help adjust patient to a sitting position

  G. Assist patient to upright position with your hands on shoulders

  H. Move other hand to opposite knee while continuing to support one shoulder with your hand and pivot patient with legs down over side of bed

  I. Provide for patient's comfort and warmth

    1. Put on slippers; place feet on footstool if patient's feet do not reach the floor

    2. Put robe on patient or cover shoulders and back with a bath blanket

    3. Place blanket over patient's legs

  J. Check pulse

  K. Watch closely for signs of weakness or fatigue

  L. Assist patient in returning to bed at end of specified period of dangling or sooner if patient is unable to tolerate procedure

    1. Remove robe and slippers

JOB SHEET #4

  2. Support patient's shoulders with one hand; with other hand under patient's ankles, swing legs up onto bed, pivoting body at the same time

  3. Ease patient down to backrest

M. Check pulse

N. Provide for patient's comfort

  1. Adjust top covers

  2. Adjust bed position and pillows

  3. Place communication device within convenient reach of patient

O. Wash hands

P. Report and record procedure and observations

PN I - 741-C

JOB SHEET #4

III. Checklist for assisting patient to dangle

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments:		
B.	Washed hands	☐	☐
	Comments:		
C.	Identified patient and explained procedure	☐	☐
	Comments:		
D.	Checked pulse	☐	☐
	Comments:		
E.	Moved patient to side of bed; if there was an injury or weakness, worked from side near the weakness	☐	☐
	Comments:		

JOB SHEET #4

		Performed well	Needs improvement
F.	Placed bed in low position	☐	☐
	Comments: ________________		
G.	Elevated head of bed to help adjust patient to a sitting position	☐	☐
	Comments: ________________		
H.	Assisted patient to upright position with student's hands on shoulders	☐	☐
	Comments: ________________		
I.	Moved other hand to opposite knee while continuing to support one shoulder with hand and pivoted patient with legs down over side of bed	☐	☐
	Comments: ________________		
J.	To provide for patient's comfort and warmth; put on slippers; placed feet on footstool if patient's feet did not reach floor	☐	☐
	Comments: ________________		

JOB SHEET #4

		Performed well	Needs improvement
K.	Put robe on patient or covered shoulders and back with a bath blanket	☐	☐
	Comments:		
L.	Placed blanket over patient's legs	☐	☐
	Comments:		
M.	Checked pulse	☐	☐
	Comments:		
N.	Watched closely for signs of weakness or fatigue	☐	☐
	Comments:		
O.	To assist patient in returning to bed at end of specified period of dangling; or sooner if patient was unable to tolerate procedure, removed robe and slippers	☐	☐
	Comments:		

JOB SHEET #4

		Performed well	Needs improvement
P.	Supported patient's shoulders with one hand; with other hand under patient's ankles, swung legs up onto bed, pivoting body at the same time	☐	☐
	Comments:		
Q.	Eased patient down to backrest	☐	☐
	Comments:		
R.	Checked pulse	☐	☐
	Comments:		
S.	To provide for patient's comfort; adjusted top covers	☐	☐
	Comments:		
T.	Adjusted bed position and pillows	☐	☐
	Comments:		

JOB SHEET #4

	Performed well	Needs improvement
U. Placed communication device within convenient reach of patient	☐	☐
Comments: ______________________________		
V. Washed hands	☐	☐
Comments: ______________________________		
W. Reported and recorded procedure and observations	☐	☐
Comments: ______________________________		

MUSCULOSKELETAL SYSTEM AND PATIENT MOVEMENT
UNIT VII

JOB SHEET #5--USE PATIENT LIFT

(NOTE: Many times patients who cannot move by themselves are too heavy to lift alone or with assistance. A lift, either hydraulic or manual, is a handy piece of equipment to have available. If used safely and correctly, the moving can be done easily and quickly.)

I. Equipment

  A. Drawsheet

  B. Protective disposable pad

  C. Patient lift and swing

  D. Bath blanket

II. Procedure

  A. Check doctor's orders to make sure lift can be used

  B. Wash hands

  C. Assemble all equipment

  D. Obtain assistance from co-worker

  E. Take equipment to bedside

  F. Identify patient and explain procedure clearly

  (NOTE: If the lift is being used for the first time, the patient could be frightened that the equipment might not hold and that he or she might be dropped.)

  G. Lock casters of bed

  H. Provide privacy

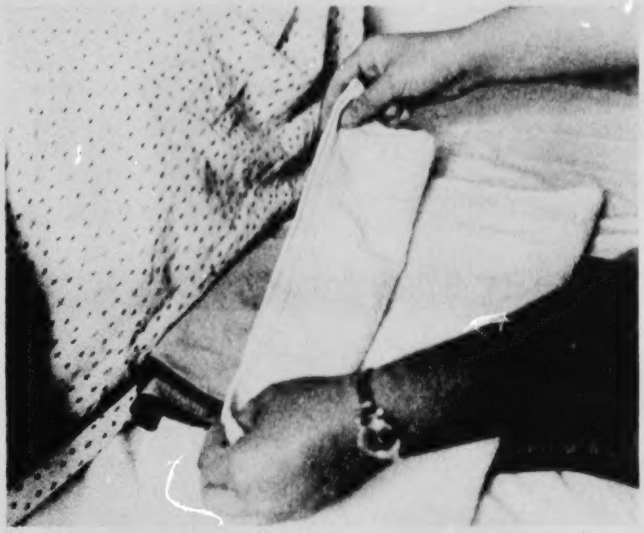
  I. Remove top linens to foot of bed as you place bath blanket over patient

  J. Turn patient on his or her side and place the sling portion under buttocks

JOB SHEET #5

K. Use same fanfolding procedure as with turn sheet and place disposable pad on top of the sling (Figure 1)

FIGURE 1



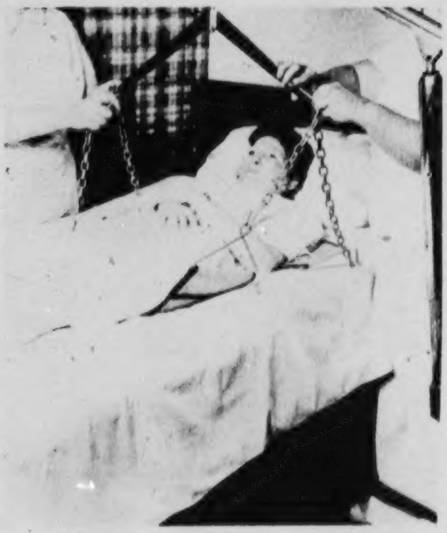
L. Turn patient over to center of sling with assistance from co-worker

M. Straighten out sling and disposable pad on other side

N. Position lift by moving base under bed parallel to the patient's hips

O. Connect sling to lift by hooking the bars to the sling (Figure 2)

FIGURE 2



JOB SHEET #5

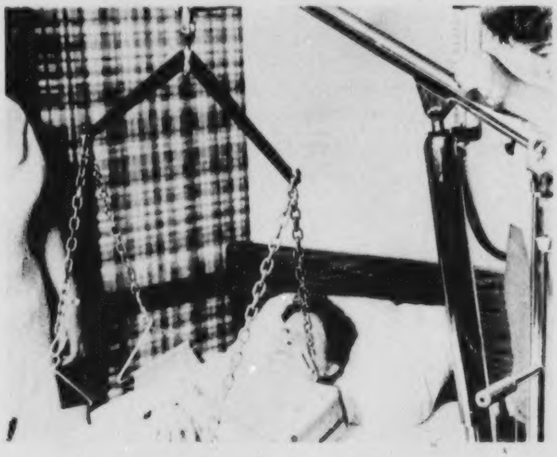
P. Prepare area where patient will be placed

(NOTE: Place bath blanket over chair or wheelchair [wheels locked].)

Q. Elevate patient by turning the handle clockwise on a manual model, or move handle back and forth on hydraulic type (Figure 3)

(**CAUTION: CHECK STABILITY OF CLIPS** as patient remains elevated over the bed.)

FIGURE 3

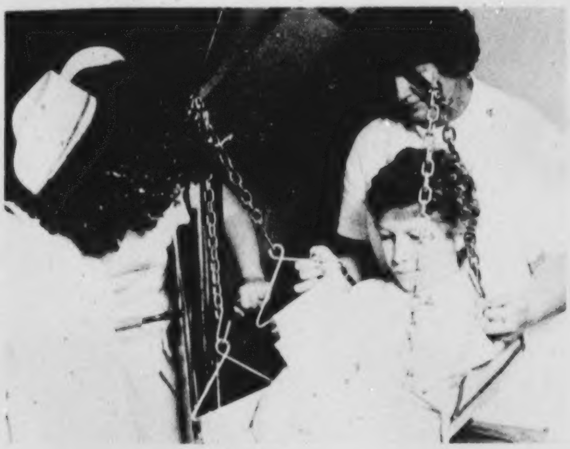


R. Move lift slowly while you reassure the patient

S. Move sling over the desired area (Figure 4)

(NOTE: Sling should be adjusted to cover the area where patient will be lowered.)

FIGURE 4



JOB SHEET #5

T. Turn the manual handle clockwise or release the hydraulic screw

(NOTE: Have assistant guide the patient while you lower to the area.)

U. Move as gradually and smoothly as possible

V. Secure patient in chair or wheelchair

W. Remove lift

(NOTE: Chains will be slack on lift; unhook the sling.)

X. Place communication device close to patient

Y. Remove lift from room and return to equipment room

Z. Wash hands

AA. Record procedure and patient's reaction

(NOTE: Return patient to bed in the same manner.)

JOB SHEET #5

III. Checklist for using patient lift

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ______________________		
B.	Checked doctor's orders to make sure lift could be used	☐	☐
	Comments: ______________________		
C.	Washed hands; assembled all equipment	☐	☐
	Comments: ______________________		
D.	Obtained assistance from co-worker	☐	☐
	Comments: ______________________		
E.	Took equipment to bedside	☐	☐
	Comments: ______________________		

JOB SHEET #5

		Performed well	Needs improvement
F.	Identified patient and explained procedure clearly	☐	☐
	Comments: ______________________		
G.	Locked casters of bed	☐	☐
	Comments: ______________________		
H.	Provided privacy	☐	☐
	Comments: ______________________		
I.	Removed top linens to foot of bed while placing bath blanket over patient	☐	☐
	Comments: ______________________		
J.	Turned patient on side and placed sling portion under buttocks	☐	☐
	Comments: ______________________		

JOB SHEET #5

		Performed well	Needs improvement
K.	Used same fanfolding procedure as with turn sheet and placed disposable pad on top of sling	☐	☐

Comments: ______________________________

____

____

L.	Turned patient over to center of sling with assistance from co-worker	☐	☐

Comments: ______________________________

____

____

M.	Straightened out sling and disposable pad on other side	☐	☐

Comments: ______________________________

____

____

N.	Positioned lift by moving base under bed parallel to patient's hips	☐	☐

Comments: ______________________________

____

____

O.	Connected sling to lift by hooking bars to sling	☐	☐

Comments: ______________________________

____

____

JOB SHEET #5

		Performed well	Needs Improvement
P.	Prepared area where patient was to be placed	☐	☐
	Comments: ______________________		
Q.	Elevated patient by turning handle clockwise on manual model, or moved handle back and forth on hydraulic type	☐	☐
	Comments: ______________________		
R.	Moved lift slowly while reassuring patient	☐	☐
	Comments: ______________________		
S.	Moved sling over desired area	☐	☐
	Comments: ______________________		
T.	Turned manual handle clockwise or released hydraulic screw	☐	☐
	Comments: ______________________		

JOB SHEET #5

		Performed well	Needs improvement
U.	Moved as gradually and smoothly as possible	☐	☐
	Comments: ______________________		
V.	Secured patient in chair or wheelchair	☐	☐
	Comments: ______________________		
W.	Removed lift	☐	☐
	Comments: ______________________		
X.	Placed communication device close to patient	☐	☐
	Comments: ______________________		
Y.	Removed lift from room and returned to equipment room	☐	☐
	Comments: ______________________		
Z.	Washed hands	☐	☐
	Comments: ______________________		

JOB SHEET #5

		Performed well	Needs improvement
AA.	Recorded procedure and patient's reaction	☐	☐

Comments: ____

____

____

MUSCULOSKELETAL SYSTEM AND PATIENT MOVEMENT
UNIT VII

JOB SHEET #6--GET PATIENT INTO CHAIR AND WHEELCHAIR

I. Procedure for getting patient into chair

A. Wash hands

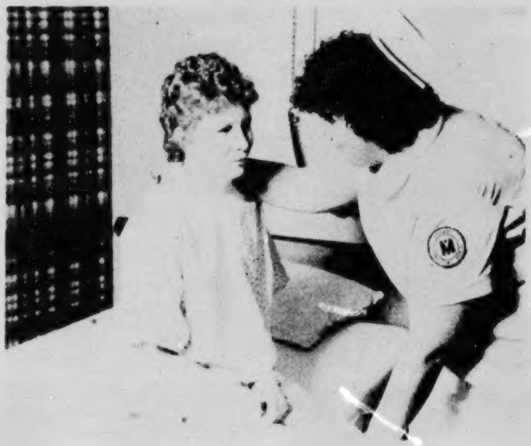
B. Identify patient and explain procedure

C. Check pulse

D. Lower bed or place footstool beside bed

E. Assist patient to a sitting position with feet on footstool or floor (Figure 1)

FIGURE 1



F. Place chair at side of bed with its back toward foot of bed (Figure 2)

FIGURE 2

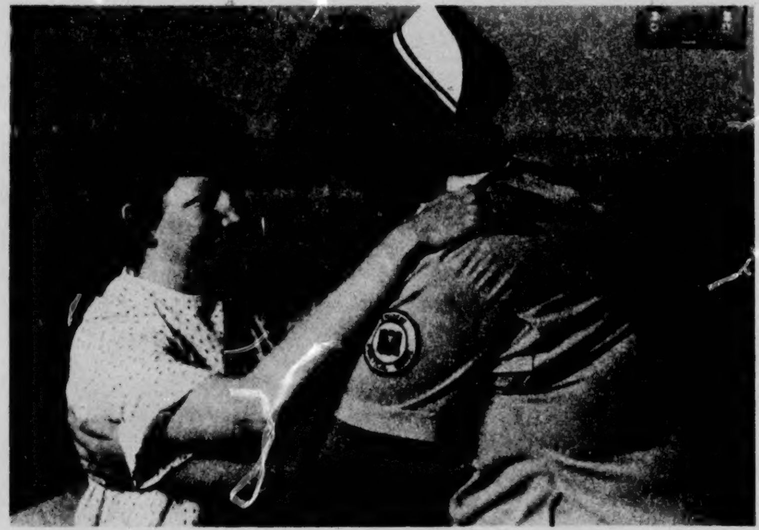
JOB SHEET #6

G. Assist patient in putting on robe and slippers

H. Stand directly in front of and facing patient, with broad base support

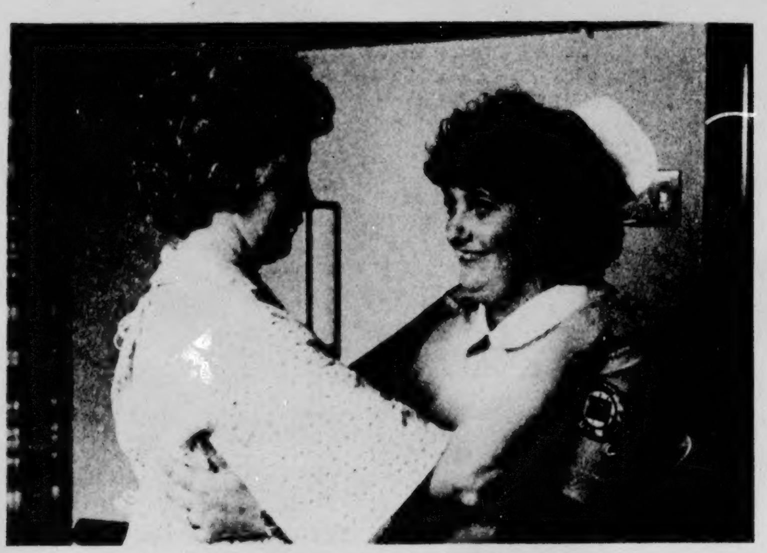
I. Have patient place hands on your shoulders; place your hands on each side of patient below armpits (Figure 3)

FIGURE 3



J. Support and turn so patient's back is toward chair as patient steps to floor (Figure 4)

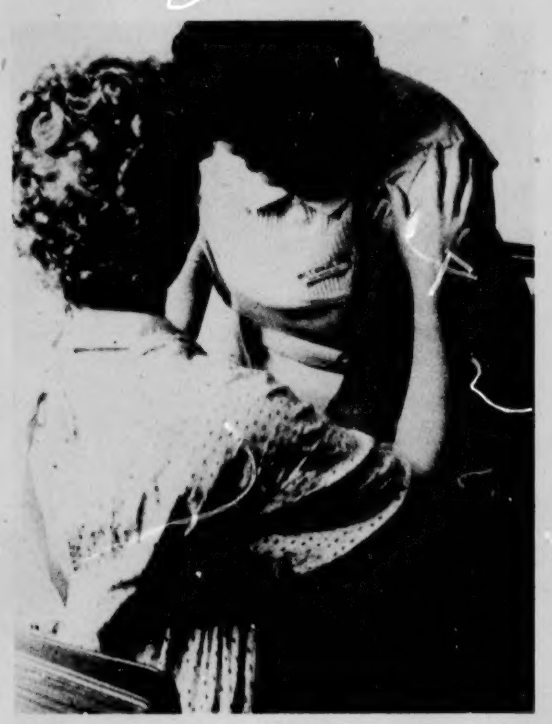
FIGURE 4



JOB SHEET #6

K. Bend your knees, while easing down to chair, as patient sits (Figure 5)

FIGURE 5



L. Cover patient's legs with blanket

M. Check pulse

N. Place communication device within convenient reach of patient

O. Reverse procedure to return patient to bed

P. Check pulse

Q. Provide for patient's comfort; return equipment to proper place

R. Report and record procedure and observations

II. Procedure for getting patient into wheelchair

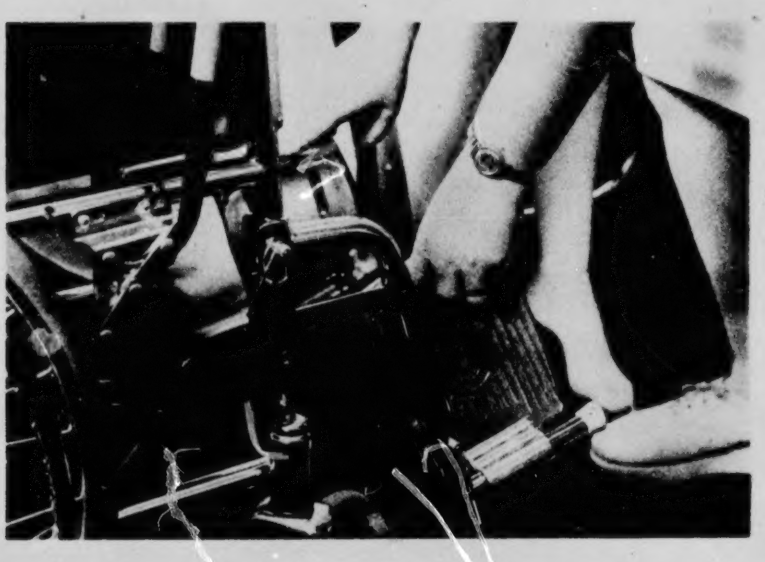
A. Follow Steps A through R, substituting wheelchair for chair

B. Position wheelchair and *LOCK* the wheels; if they cannot be locked, have someone hold chair in place

JOB SHEET #6

C. Fold back footrests so patient will not step on them and tip the chair (Figure 6)

FIGURE 6



D. Secure patient in wheelchair

JOB SHEET #6

III. Checklist for getting patient into chair and wheelchair

		Performed well	Needs improvement
A.	To get patient into chair, washed hands	☐	☐
	Comments: ______________________________		
B.	Identified patient and explained procedure	☐	☐
	Comments: ______________________________		
C.	Checked pulse	☐	☐
	Comments: ______________________________		
D.	Lowered bed or placed footstool beside bed	☐	☐
	Comments: ______________________________		
E.	Assisted patient to a sitting position with feet on footstool or floor	☐	☐
	Comments: ______________________________		

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JOB SHEET #6

Performed well Needs improvement

F. Placed chair at side of bed with its back toward foot of bed ☐ ☐

Comments: ______________________________

G. Assisted patient in putting on robe and slippers ☐ ☐

Comments: ______________________________

H. Stood directly in front of and facing patient, with broad base support ☐ ☐

Comments: ______________________________

I. Had patient place hands on shoulders; placed hands on each side of patient below armpits ☐ ☐

Comments: ______________________________

J. Supported and turned so patient's back was toward chair as patient stepped to floor ☐ ☐

Comments: ______________________________

JOB SHEET #6

		Performed well	Needs improvement
K.	Bent knees, while easing down to chair, as patient sat	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
L.	Covered patient's legs with blanket	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
M.	Checked pulse	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
N.	Placed communication device within convenient reach of patient	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
O.	Reversed procedure to return patient to bed; checked pulse	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		

JOB SHEET #6

		Performed well	Needs improvement
P.	Provided for patient's comfort; returned equipment to proper place	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
Q.	Reported and recorded procedure and observations	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
R.	To get patient into wheelchair, followed steps A through R	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
S.	Positioned wheelchair and *LOCKED* the wheels; if they could not be locked, had someone hold chair in place	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
T.	Folded back footrests so patient would not step on them and tipped the chair	☐	☐

Comments: ______________________________

____

____

JOB SHEET #6

	Performed well	Needs improvement
U. Secured patient in wheelchair	☐	☐

Comments: ______________________________

MUSCULOSKELETAL SYSTEM AND PATIENT MOVEMENT
UNIT VII

JOB SHEET #7--ASSIST PATIENT TO WALK

I. Equipment--Patient's robe and slippers

(NOTE: Be sure the patient has shoes that do not slip and that fit properly.)

II. Procedure

(NOTE: Watch for signs of weakness or syncope throughout procedure.)

A. Wash hands

B. Identify patient and explain procedure

C. Check pulse

D. Place bed in low position or provide footstool

E. Elevate head of bed; fold down top bedding

F. Assist patient to a sitting position on side of bed

G. Assist patient in putting on robe and slippers

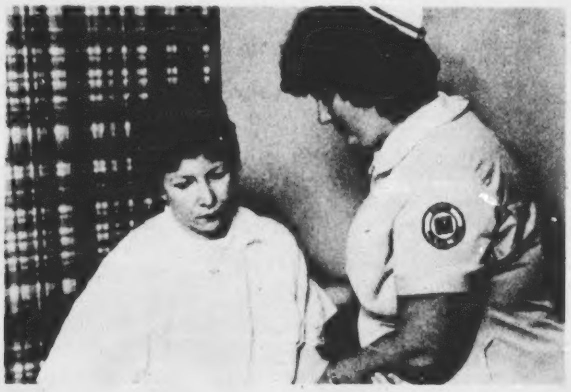
(NOTE: Slippers should fit well. Loose, floppy shoes with slippery soles are difficult to wear and dangerous for a weakened patient to walk in.)

H. Check pulse

I. Help patient to stand

1. Have patient place feet firmly on floor or footstool and push down on mattress with hands to slide forward to edge of bed (Figure 1)

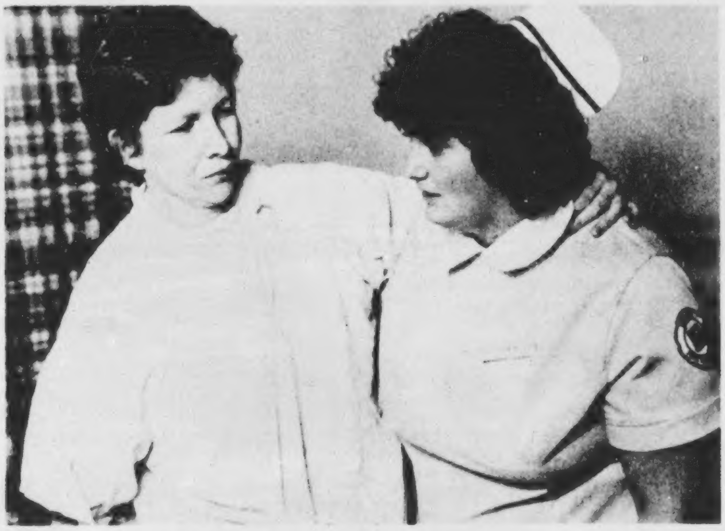
FIGURE 1



JOB SHEET #7

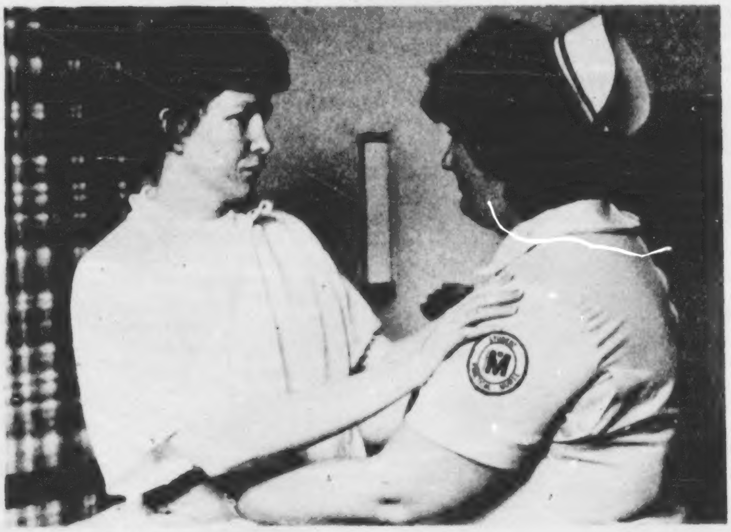
2. Support patient's movements by placing one hand under axilla as patient stands (Figure 2)

FIGURE 2



3. Stand in front of patient and hold securely to aid in balance (Figure 3)

FIGURE 3

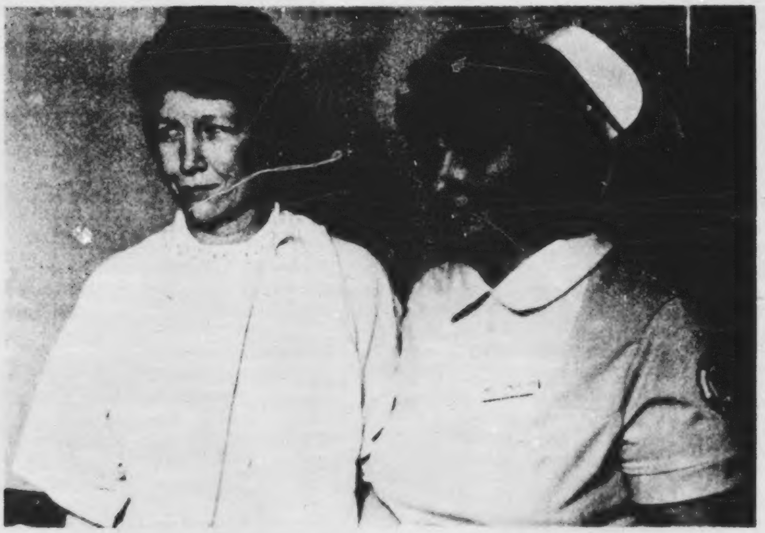


JOB SHEET #7

J. Assist patient in walking

1. Encourage patient to stand straight while walking
2. Have patient hold onto your arm for minimal support
3. Hold patient's left hand in your left hand, with your right arm holding patient around waist for moderate support (Figure 4)

FIGURE 4



4. Have another person support patient on other side or provide chair to slide along in front of patient for moderate support

K. Reverse procedure to assist patient in returning to bed

L. Check pulse

M. Provide for patient's comfort; place communication device within convenient reach of patient

N. Wash hands

O. Report and record procedure and observations

JOB SHEET #7

III. Checklist for assisting patient to walk

	Performed well	Needs improvement
A. Gathered necessary equipment; washed hands	☐	☐
Comments: ____________________		
B. Identified patient and explained procedure	☐	☐
Comments: ____________________		
C. Checked pulse	☐	☐
Comments: ____________________		
D. Placed bed in low position or provided footstool	☐	☐
Comments: ____________________		
E. Elevated head of bed; folded down top bedding	☐	☐
Comments: ____________________		

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JOB SHEET #7

		Performed well	Needs improvement
F.	Assisted patient to sitting position on side of bed	☐	☐
	Comments: ______________________		
G.	Assisted patient in putting on robe and slipppers	☐	☐
	Comments: ______________________		
H.	Checked pulse	☐	☐
	Comments: ______________________		
I.	To help patient stand; had patient place feet firmly on floor or footstool and push down on mattress with hands to slide forward to edge of bed	☐	☐
	Comments: ______________________		
J.	Supported patient's movements by placing one hand under axilla as patient stood	☐	☐
	Comments: ______________________		

JOB SHEET #7

		Performed well	Needs improvement
K.	Stood in front of patient and held securely to aid in balance	☐	☐
	Comments:		
L.	To assist patient in walking, encouraged patient to stand straight while walking	☐	☐
	Comments:		
M.	Had patient hold onto arm for minimal support	☐	☐
	Comments:		
N.	Held patient's left hand in left hand with right arm holding patient around waist for moderate support	☐	☐
	Comments:		
O.	Had another person support patient on other side or provided chair to slide along in front of patient for moderate support	☐	☐
	Comments:		

JOB SHEET #7

		Performed well	Needs improvement
P.	Reversed procedure to assist patient in returning to bed	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
Q.	Checked pulse	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
R.	Provided for patient's comfort; placed communication device within convenient reach of patient	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
S.	Washed hands	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
T.	Reported and recorded procedure and observations	☐	☐

Comments: ______________________________

____

____

MUSCULOSKELETAL SYSTEM AND PATIENT MOVEMENT
UNIT VII

JOB SHEET #8--PUT PATIENT ON CARRIER

I. Procedure for patient who can assist

   A. Replace top covers with bath blanket

   B. Place carrier close to bed and parallel with it

   C. Lock wheels of bed and carrier

   D. Steady carrier and help patient move onto it

   E. Place pillow under head

   F. Adjust bath blanket to cover patient

   G. Secure safety devices; caution patient to keep arms close to body

   H. Transport feet first at moderate speed

   I. Remain at head of carrier during transportation, observing patient for reaction

II. Procedure for helpless patient

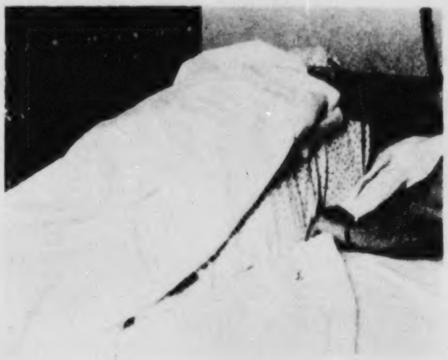
   (NOTE: This procedure requires three people.)

   A. Replace top covers with bath blanket

   B. Loosen drawsheet on both sides

   C. Roll drawsheet close to patient on carrier side (Figure 1)

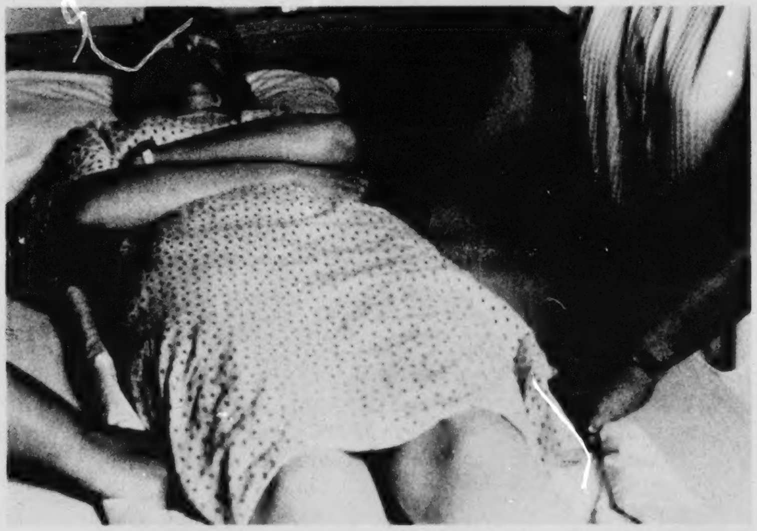
FIGURE 1



JOB SHEET #8

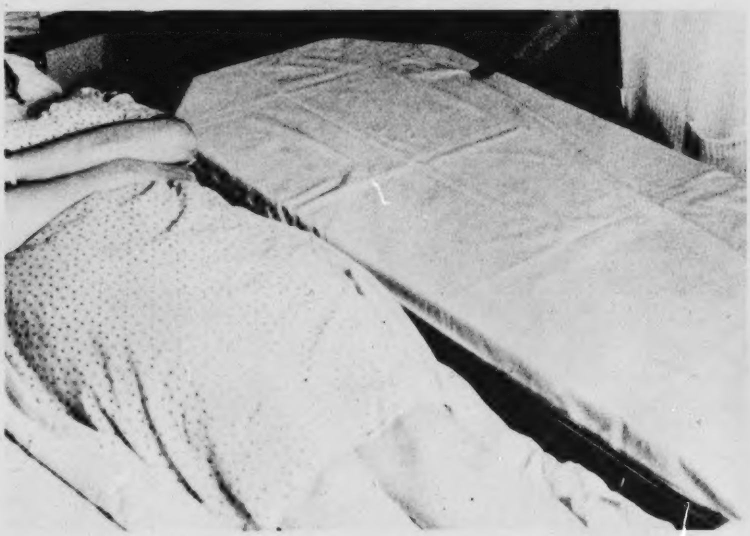
D. Pull patient close to edge of bed using drawsheet (Figure 2)

FIGURE 2



E. Place carrier parallel to bed; lock wheels on carrier and bed (Figure 3)

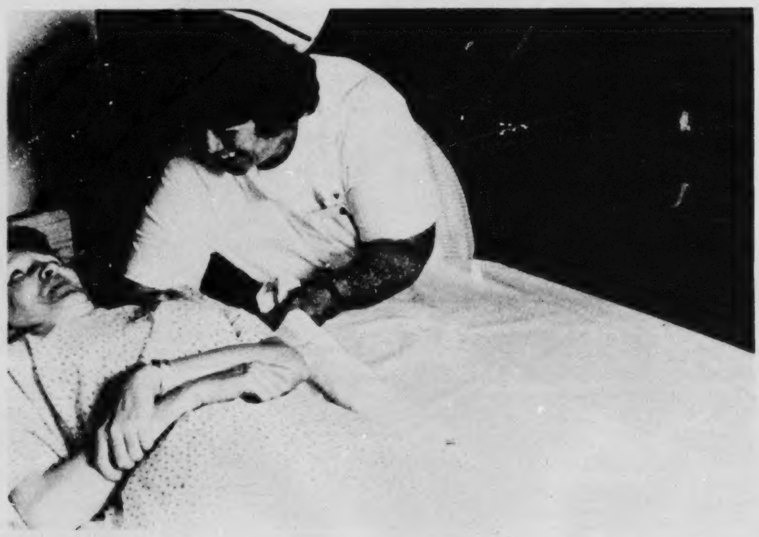
FIGURE 3



JOB SHEET #8

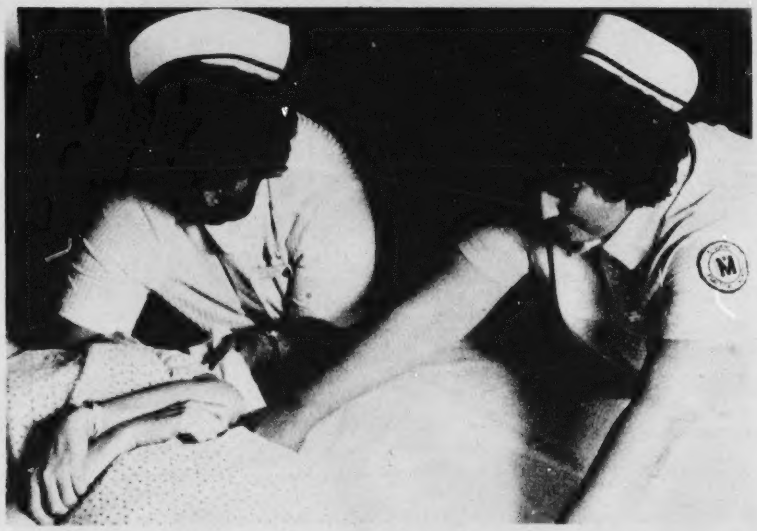
F. First person puts one arm under patient's head and grasps top corner of drawsheet with other hand (Figure 4)

FIGURE 4



G. Second person grasps drawsheet above and below patient's buttocks (Figure 5)

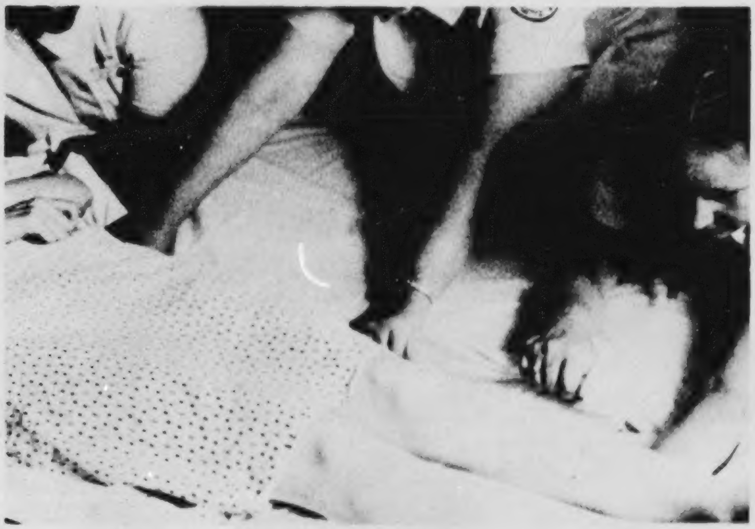
FIGURE 5



JOB SHEET #8

H. Third person grasps lower corner of drawsheet and places other arm under patient's legs (Figure 6)

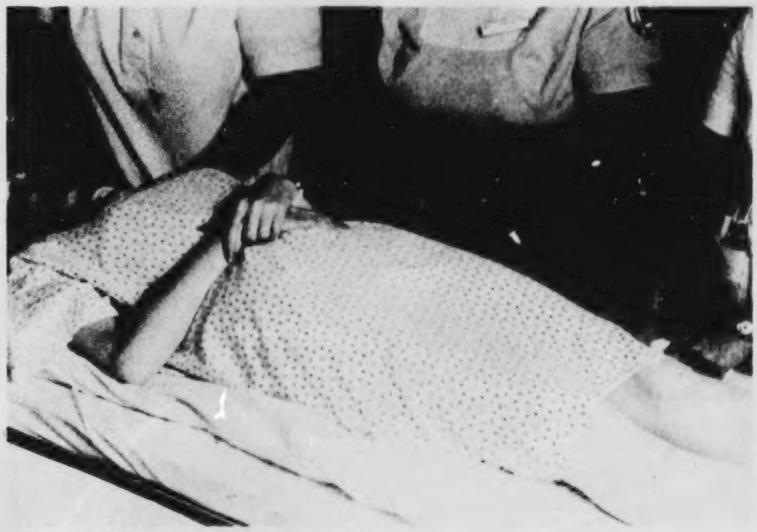
FIGURE 6



I. Pull patient onto carrier at prearranged signal

J. Roll both sides of drawsheet close to patient's body (Figure 7)

FIGURE 7



K. Adjust bath blanket and pillow

L. Secure safety devices

1100

JOB SHEET #8

III. Procedure for three-person lift

A. Replace top covers with bath blanket folded close to patient

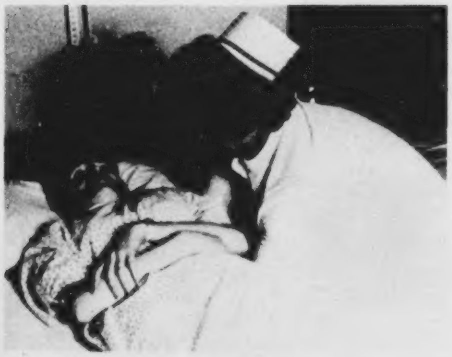
B. Place carrier at right angle to patient's head

C. To coordinate movements, the three persons must work by prearranged signals, called by the person who moves patient's head

D. At the count of "one," three people observing proper body mechanics, bend their knees and place their arms under patient

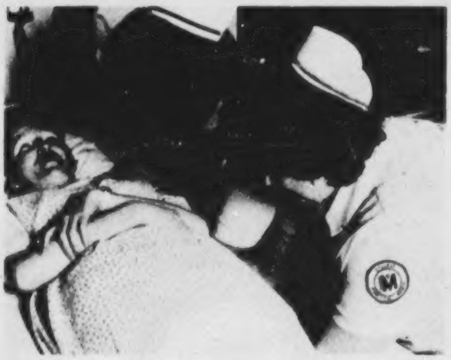
1. Person one places one arm under neck and shoulders and the other arm under patient's back (Figure 8)

FIGURE 8



2. Person two places one arm under small of the back and the other arm under buttocks (Figure 9)

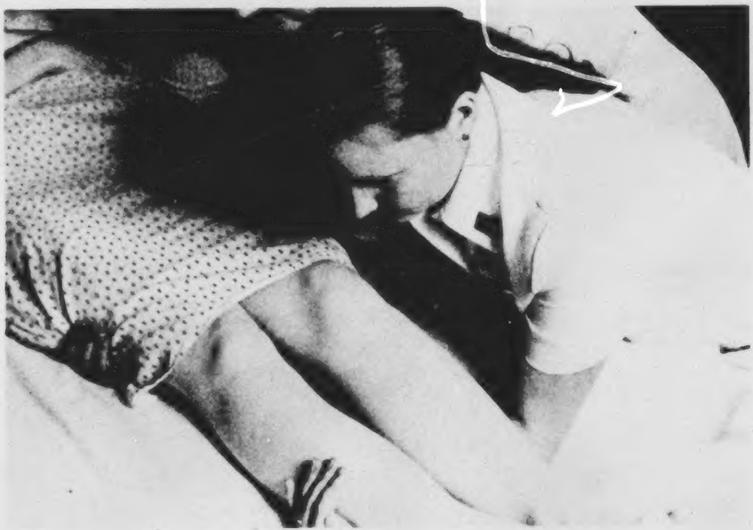
FIGURE 9



JOB SHEET #8

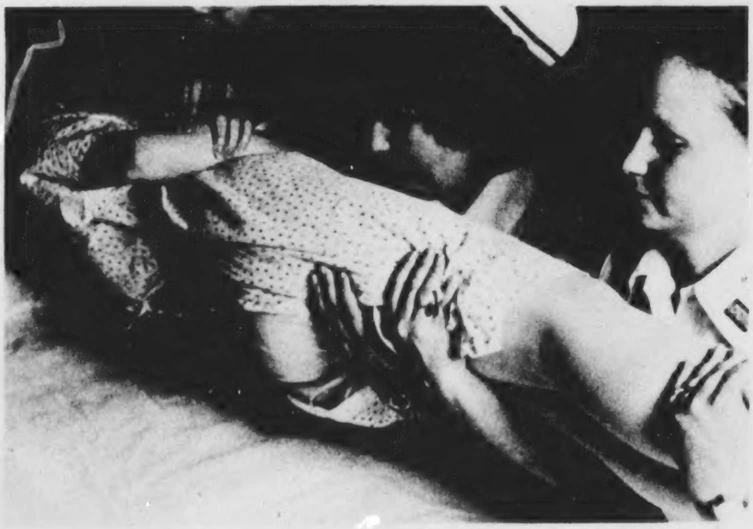
3. Person three places one arm just below buttocks and the other arm under legs (Figure 10)

FIGURE 10



E. At the count of "two," the three persons rock back and simultaneously lift and roll patient to their chests (Figure 11)

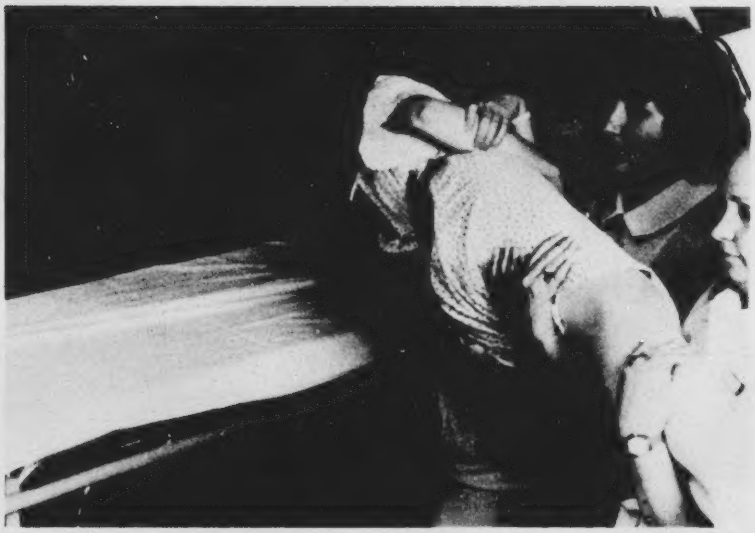
FIGURE 11



JOB SHEET #8

F. At the count of "three," they rise, step back, and pivot toward stretcher (Figure 12)

FIGURE 12



G. At the count of "four," they bend their knees and rest their elbows on stretcher

H. At the count of "five," each lifter extends arms, allowing patient to roll onto stretcher (Figure 13)

FIGURE 13

JOB SHEET #8

I. At the count of "six," each lifter withdraws arms

J. Adjust bath blanket to cover patient

K. Secure safety devices

JOB SHEET #8

IV. Checklist for putting patient on carrier (patient who can assist)

	Performed well	Needs improvement
A. Replaced top covers with bath blanket	☐	☐
Comments: ____________________		
B. Placed carrier close to bed and parallel with it	☐	☐
Comments: ____________________		
C. Locked wheels of bed and carrier	☐	☐
Comments: ____________________		
D. Steadied carrier and helped patient move onto it	☐	☐
Comments: ____________________		
E. Placed pillow under head	☐	☐
Comments: ____________________		

JOB SHEET #8

	Performed well	Needs improvement
F. Adjusted bath blanket to cover patient	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
G. Secured safety devices; cautioned patient to keep arms close to body	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
H. Transported feet first at moderate speed	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
I. Remained at head of carrier during transportation, observing patient for reaction	☐	☐

Comments: ____________________

____

____

V. Checklist for putting patient on carrier (helpless patient)

	Performed well	Needs improvement
A. Replaced top covers with bath blanket	☐	☐

Comments: ____________________

____

____

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JOB SHEET #8

		Performed well	Needs improvement
B.	Loosened drawsheet on both sides	☐	☐
	Comments:		
C.	Rolled drawsheet close to patient on carrier side	☐	☐
	Comments:		
D.	Pulled patient close to edge of bed using drawsheet	☐	☐
	Comments:		
E.	Placed carrier parallel to bed; locked wheels on carrier and bed	☐	☐
	Comments:		
F.	First person put one arm under patient's head and grasped top corner of drawsheet with other hand	☐	☐
	Comments:		

JOB SHEET #8

Performed well Needs improvement

G. Second person grasped drawsheet above and below patient's buttocks ☐ ☐

Comments: ______________________________

____

____

H. Third person grasped lower corner of drawsheet and placed other arm under patient's legs ☐ ☐

Comments: ______________________________

____

____

I. Pulled patient onto carrier at prearranged signal ☐ ☐

Comments: ______________________________

____

____

J. Rolled both sides of drawsheet close to patient's body ☐ ☐

Comments: ______________________________

____

____

K. Adjusted bath blanket and pillow ☐ ☐

Comments: ______________________________

____

____

JOB SHEET #8

	Performed well	Needs improvement
L. Secured safety devices	☐	☐

Comments: ______________________________

____

____

VI. Checklist for putting patient on carrier (three-person lift)

	Performed well	Needs improvement
A. Replaced top covers with bath blanket folded close to patient	☐	☐

Comments: ______________________________

____

____

B. Placed carrier at right angle to patient's head	☐	☐

Comments: ______________________________

____

____

C. To coordinate movements, three persons worked by prearranged signals, called by person who moved patient's head	☐	☐

Comments: ______________________________

____

____

JOB SHEET #8

		Performed well	Needs improvement
D.	At the count of "one" three people, observing proper body mechanics, bent their knees and placed their arms under patient; person one placed one arm under neck and shoulders and the other arm under patient's back	☐	☐
	Comments: ____________________ ____________________ ____________________		
E.	Person two placed one arm under small of back and the other arm under buttocks	☐	☐
	Comments: ____________________ ____________________ ____________________		
F.	Person three placed one arm just below buttocks and the other arm under legs	☐	☐
	Comments: ____________________ ____________________ ____________________		
G.	At the count of "two," the three persons rocked back and simultaneously lifted and rolled patient to their chests	☐	☐
	Comments: ____________________ ____________________ ____________________		

JOB SHEET #8

		Performed well	Needs improvement
H.	At the count of "three," they rose, stepped back, and pivoted toward stretcher	☐	☐
	Comments:		
I.	At the count of "four," they bent their knees and rested their elbows on stretcher	☐	☐
	Comments:		
J.	At the count of "five," each lifter extended arms, allowing patient to roll onto stretcher	☐	☐
	Comments:		
K.	At the count of "six," each lifter withdrew arms	☐	☐
	Comments:		
L.	Adjusted bath blanket to cover patient	☐	☐
	Comments:		

JOB SHEET #8

	Performed well	Needs improvement
M. Secured safety devices	☐	☐

Comments: ______________________________

____

____

PN I - 791-C

MUSCULOSKELETAL SYSTEM AND PATIENT MOVEMENT
UNIT VII

TEST

NAME ______________________________ SCORE __________

1. Match terms associated with the muscular system to the correct definitions. Write the correct numbers in the blanks.

_____a. Lacking tone in muscle

_____b. Independent of the will

_____c. Study of muscles

_____d. Loss of power to contract after prolonged periods of muscle contraction

_____e. Controlled by the will

_____f. Narrow strip of dense, connective tissue that attaches a muscle to a bone

_____g. Wasting away (degeneration)

_____h. Within a muscle

_____i. Flat, fibrous sheet of connective tissue that attaches muscle to bone or other tissues at their origin or insertion

_____j. Muscles that are responsible for prime action

_____k. Muscles in the group that oppose the action of the prime mover and that must be relaxed so that movement may take place

_____l. Beginning of something; the more fixed attachment of the muscle

_____m. Muscles that assist the prime movers by stabilizing the joint

_____n. Place of attachment of a muscle to the bone so that movement may take place

_____o. Point of junction between two bones

_____p. Able to walk

1. Myology
2. Muscle fatigue
3. Involuntary
4. Atrophy
5. Tendon
6. Prime movers
7. Voluntary
8. Aponeurosis
9. Intramuscular
10. Origin
11. Flaccid
12. Antagonists
13. Insertion
14. Synergists
15. Ambulatory
16. Joint

2. Distinguish between types of muscle tissues. Write an "SK" in the blanks for skeletal or striated tissue, an "SM" for a smooth or nonstriated tissue, and a "C" for cardiac tissue.

______ a. Form the majority of the heart wall

______ b. Sometimes referred to as *visceral, involuntary muscle*

______ c. Made up of several fibers, each containing a muscle cell

______ d. Fibers divide and interconnect, but each has a separate cell

______ e. Sometimes referred to as *voluntary muscle*

______ f. Form layers of the walls of hollow organs and blood vessels

______ g. Made up of fibers in flat sheets that have cells with one nucleus

______ h. Responsible for movement of the bones

______ i. Action of muscle is involuntary

______ j. Responsible for slower, sustained contractions needed in digestion, circulation of body fluids

3. List parts of the muscle.

a. ______________________________

b. ______________________________

c. ______________________________

4. Match characteristics of muscle tissue to the correct definitions. Write the correct numbers in the blanks.

______ a. Ability to stretch or lengthen

______ b. Ability to contract or shorten

______ c. Slight tension in muscle, present at all times to allow muscle to act more easily and quickly

______ d. Ability to return to original size and shape after being stretched

______ e. Ability to respond to a stimulus

1. Contractility
2. Irritability
3. Elasticity
4. Tonus
5. Extendibility

5. Select from the following list major functions of the muscles. Write an "X" in the correct blanks.

______a. Protection of internal organs

______b. Regulation of body movement

______c. Action made independently of the nervous system

______d. Heat and energy that result from a chemical reaction

______e. Movement

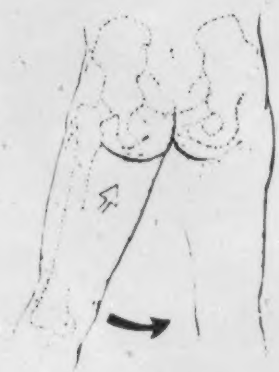
______f. Production of digestive enzymes

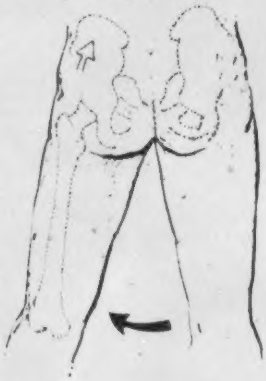
______g. Posture and body mechanics

6. Identify types of muscle actions. Write the correct action in the blanks.

Abduction moves away from a part
Adduction moves toward a part or midline
Flexion bends a joint
Extension straightens a joint
Rotation moves a part around an axis
Pronation moves the hand so that the palm is down

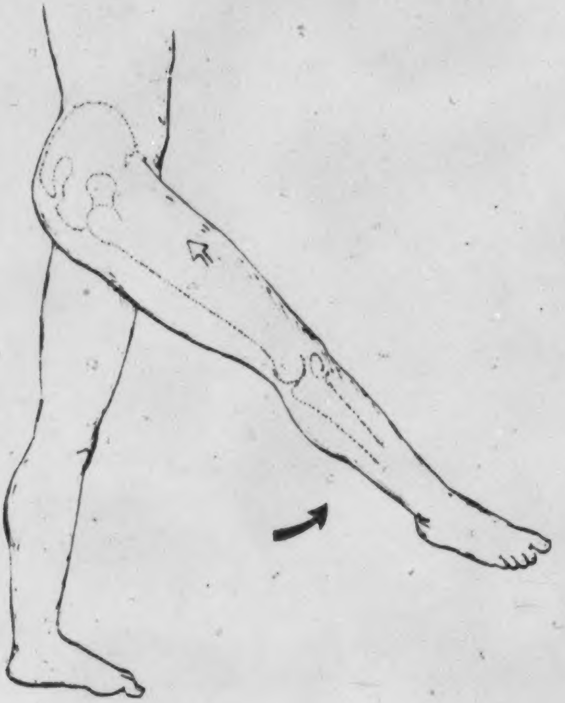
Depression lowers a part
Elevation lifts a part
Eversion turns a part outward
Inversion turns a part inward
Supination moves the hand so that the palm is up

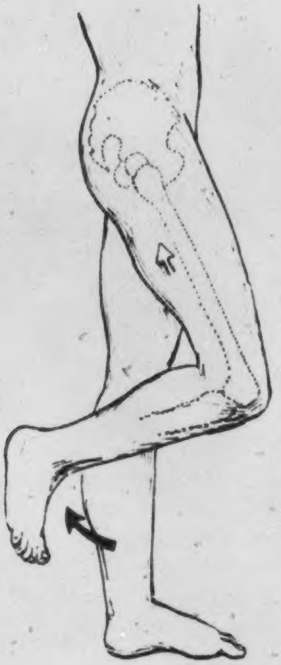




a. ______________________________
____

b. ______________________________
____





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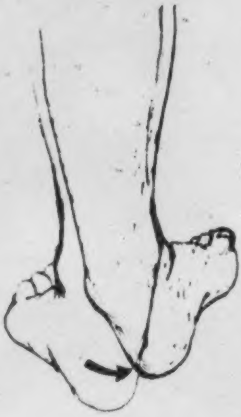

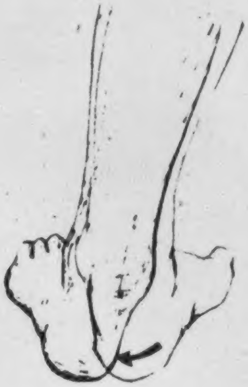

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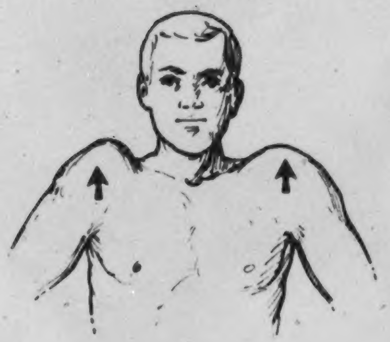

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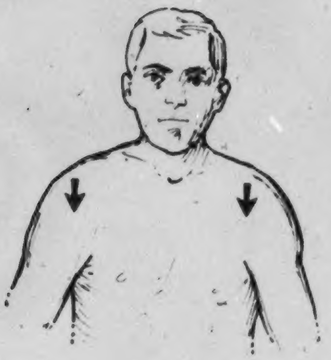

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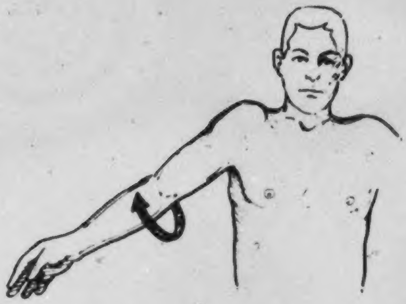

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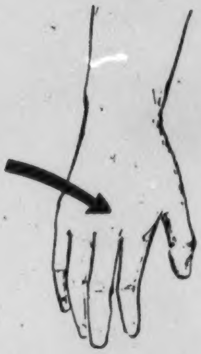

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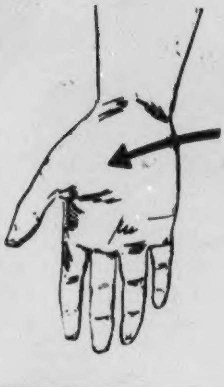


k.

7. List criteria to use to help remember names of muscles.

a. ______________________________

b. ______________________________

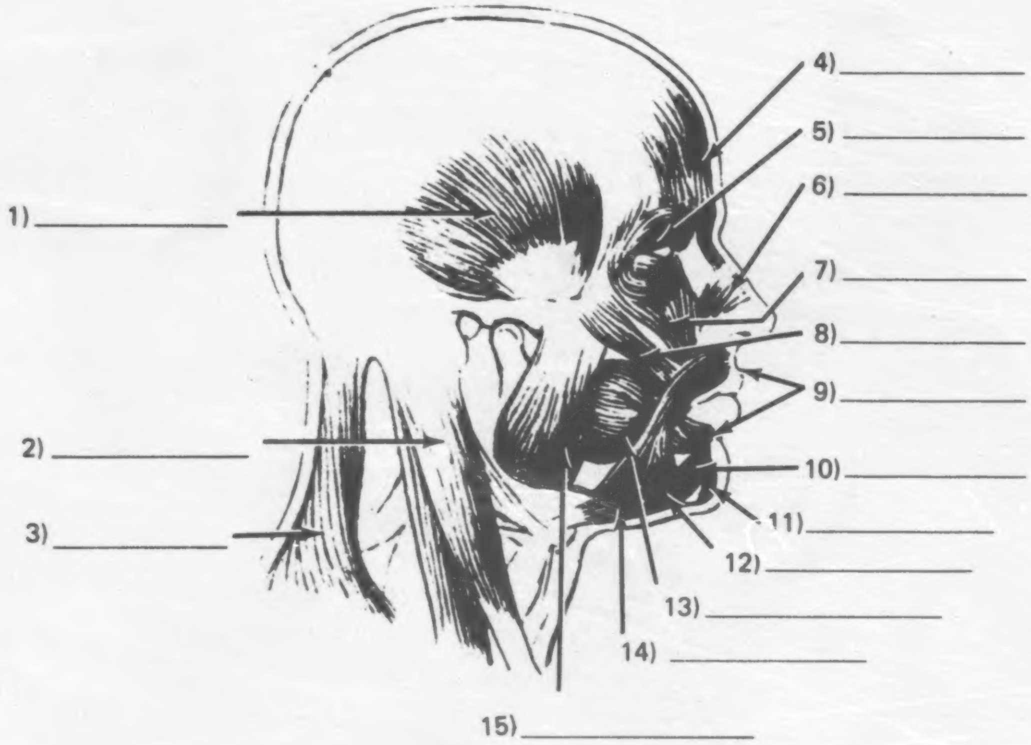
c. ______________________________

d. ______________________________

e. ______________________________

8. Identify principal skeletal muscles on given diagrams. Write the correct names in the blanks.

a. Head and neck

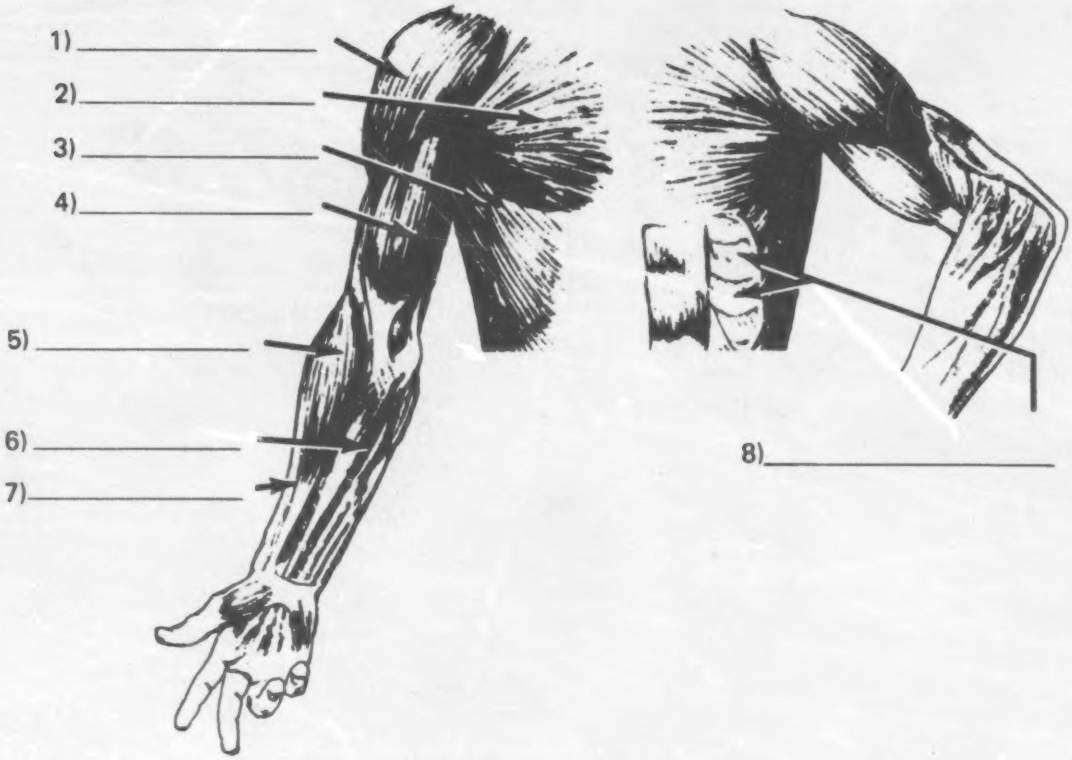


Temporalis
Sternocleidomastoid
Quadratus labii superioris
Orbicularis oris
Triangularis
Digastricus

Frontalis
Trapezius
Zygomaticus
Quadratus labii inferioris
Masseter

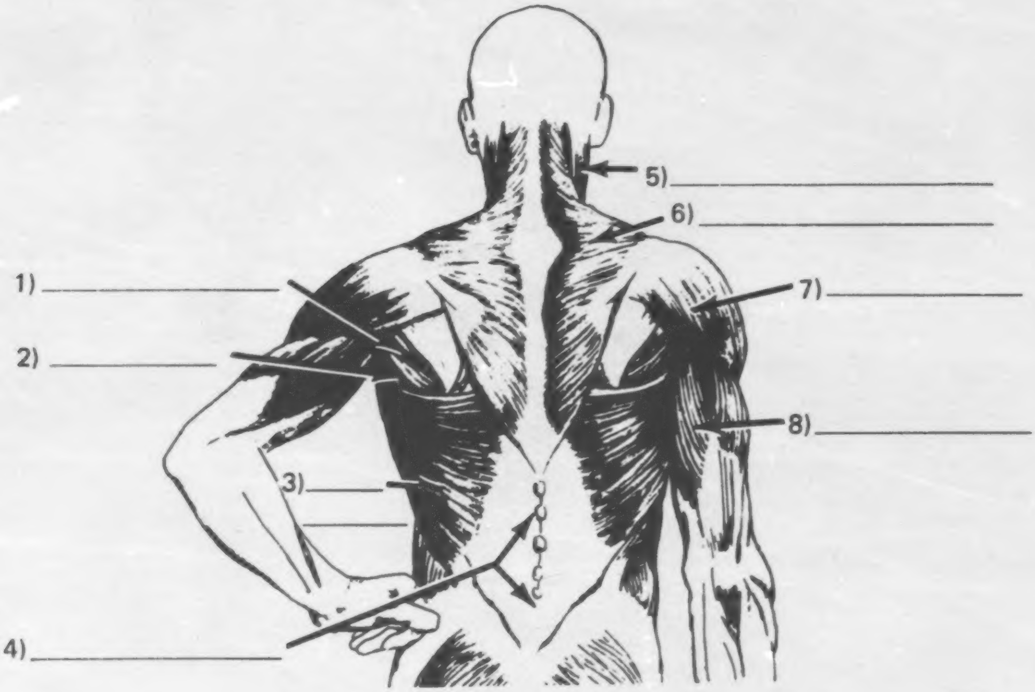
Orbicularis oculi
Nasalis
Mentalis
Buccinator

b. Chest and arm



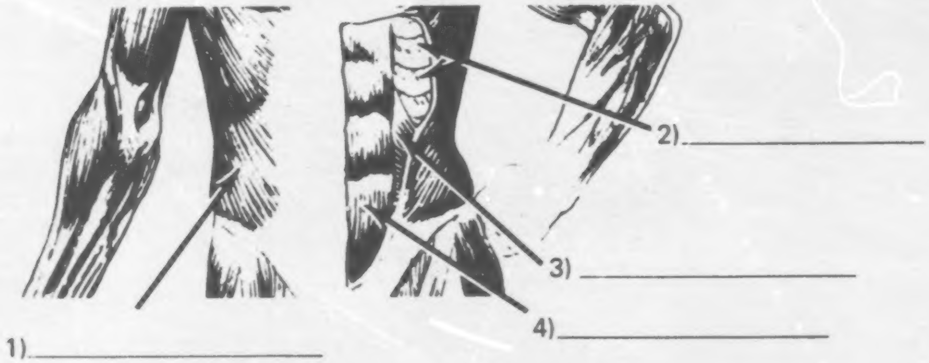
Deltoid
Biceps brachii
Extensor carpi
Pectoralis major
Brachioradialis
Intercostals
Serratus anterior
Flexor carpi

c. Back



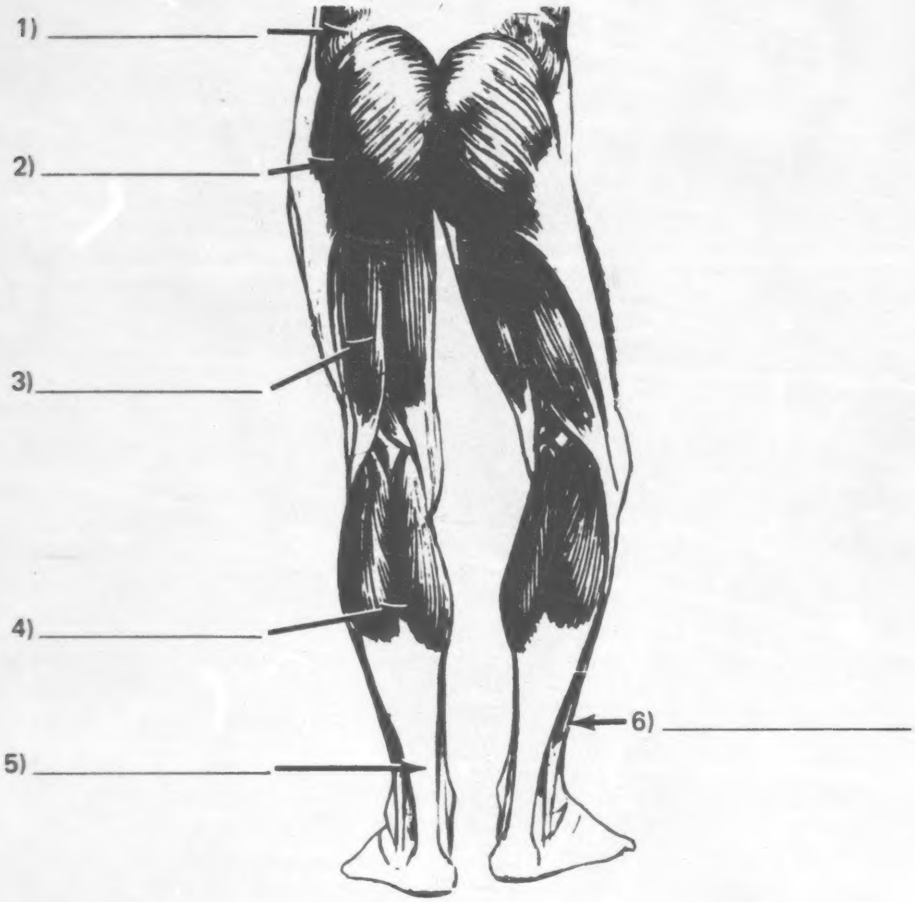
Teres minor
Teres major
Latissimus dorsi
Sternocleidomastoid
Deltoid
Lumbodorsal fascia
Trapezius
Triceps

d. Abdomen



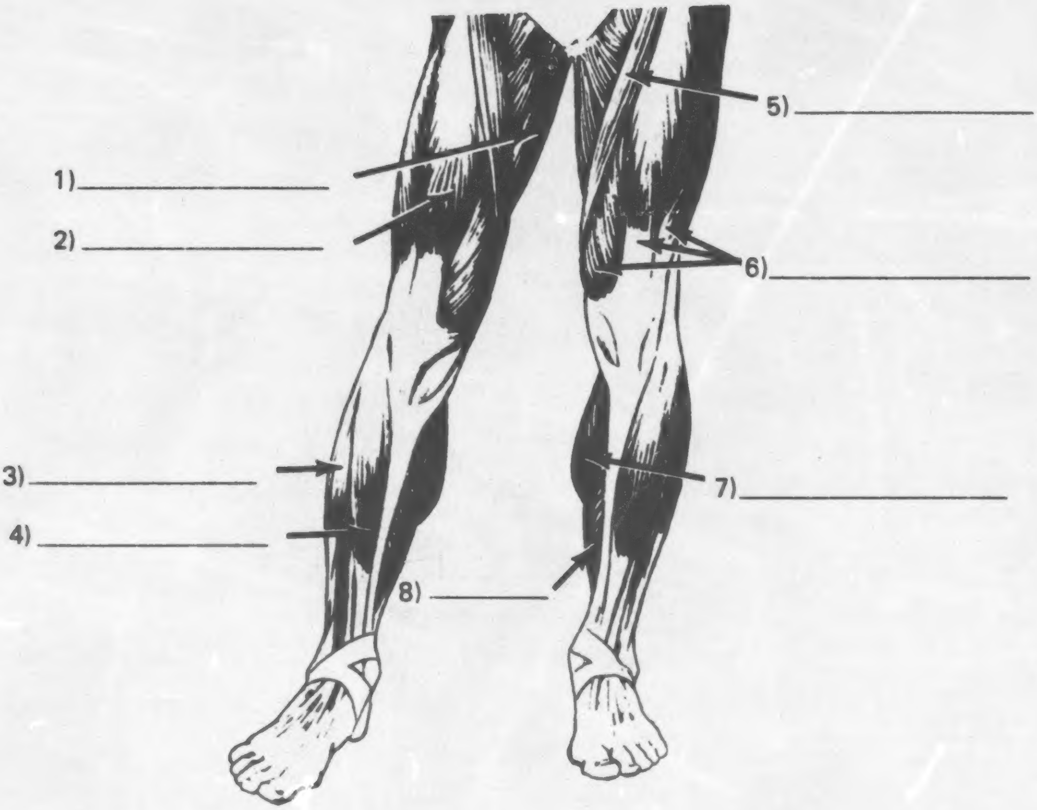
Intercostals
Rectus abdominis
External oblique
Internal oblique

e. Buttocks and posterior leg



Gluteus medius
Gastrocnemius
Gluteus maximus
Soleus
Biceps femoris
Achilles tendon

f. Anterior leg



Adductor longus
Gastrocnemius
Rectus femoris

Sartorius
Peroneus longus
Soleus

Quadriceps femoris
Tibialis anterior

9. Match terms associated with muscle movement to the correct definitions. Write the correct numbers in the blanks.

_____ a. Compound (enzyme) that when split, produces energy to assist in muscle movement

_____ b. Part of the nervous system that controls involuntary body functions

_____ c. Ending of a motor nerve fiber on a skeletal muscle fiber

_____ d. Condition that occurs when muscles continue to act without oxygen and build up end products, such as lactic acid, and energy fails

_____ e. Occurs when equal tension on the muscle is held while the length of the muscle is decreased

_____ f. Compound which plays an important role in the transmission of nerve impulses

_____ g. State of sustained contraction of a muscle

_____ h. Law that a stimulus to a nerve or muscle causes the muscle or nerve to respond to its greatest extent, or not at all

_____ i. Muscle increases its tension without shortening

_____ j. Quick contraction of a muscle

1. Motor end plate
2. Acetylcholine
3. All-or-none law
4. ATP (adenosine triphosphate)
5. Muscle fatigue
6. Tetanus
7. Twitch
8. Isotonic muscle contraction
9. Autonomic nervous system
10. Isometric muscle contraction

10. Describe the mechanisms of movement of muscles.

a. Skeletal muscle-- ____

____

____

____

____

____

____

____

____

____

____

____

____

b. Cardiac muscle-- ______________________________

____

____

____

____

____

____

c. Smooth muscle-- ______________________________

____

____

____

____

11. Match terms associated with the skeletal system to the correct definitions. Write the correct numbers in the blanks.

_____a. Pertaining to a limb or an appendage

_____b. Openings, hollows, depressions, projections, or processes which serve a specific purpose

_____c. Triangular projection of the spine of the scapula that forms the point of the shoulder and articulates with the clavicle

_____d. Central space in a long bone

_____e. Knob or rounded piece at the end of a bone that helps make a joint

_____f. Line of junction of cranial bones

_____g. Pertaining to the central part; the skeleton of the head and trunk

_____h. Narrow edge or ridge on a bone

_____i. Tough, fibrous band binding together bones or supporting internal organs

1. Bone markings
2. Condyle
3. Crest
4. Appendicular
5. Axial
6. Acromial process
7. Suture
8. Medullary cavity
9. Ligament

______j. Study of bones

______k. Hole or opening for passage of blood vessels, nerves, and ligaments

______l. Manlike; resembling a man

______m. Study of joints

______n. Depression or hollow, usually to accomodate some other nearby structure

______o. Point where bones are joined together; a joint

______p. Womanlike; resembling a woman

______q. Rounded portion beyond the narrow neckline portion of a long bone

______r. White elastic substance attached to bone surfaces at the joints

______s. Chamber or cavity in a bone

______t. In the fetus and newborn, the membranous site of the future union of two or more bones

______u. Small, rounded bone projection

______v. Very large process on a bone

______w. Tube-shaped opening

______x. Large roughened projection

10. Foramen
11. Android
12. Fossa
13. Osteology
14. Arthrology
15. Articulation
16. Gynecoid
17. Head
18. Tuberosity
19. Fontanel
20. Trochanter
21. Process
22. Sinus
23. Cartilage
24. Meatus

12. Select from the following list functions of the skeletal system. Write an "X" in the correct blanks.

______a. Produces enzymes

______b. Protects vital organs

______c. Stores minerals, such as calcium and phosphorus

______d. Comprises 75 percent of body weight

______e. Acts independently of the nervous system

______f. Provides shape and support

______g. Manufactures red blood cells, platelets, and some white cells

______h. Assists in body movement

13. List the elements found in bones.

a. ______________________________

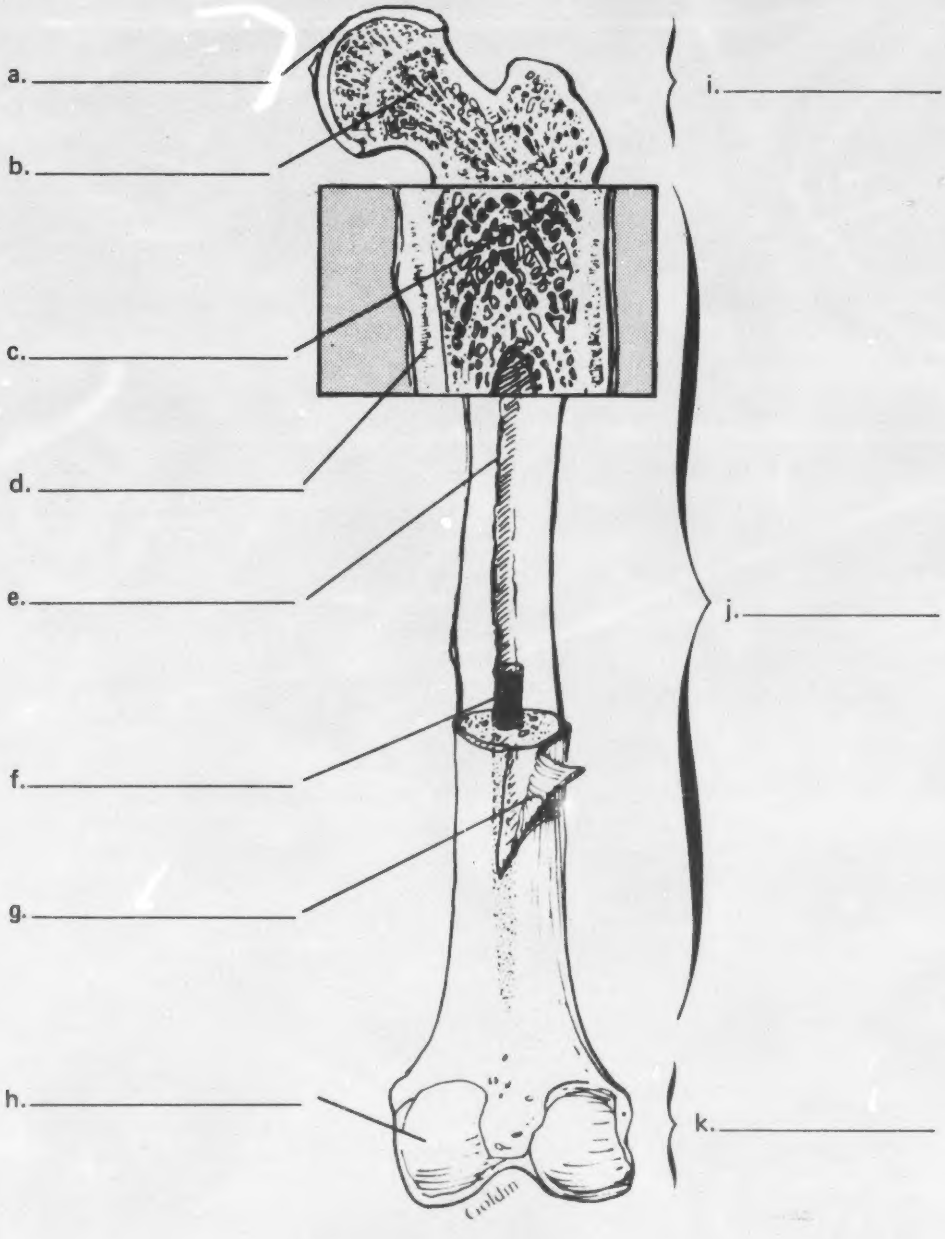
b. ______________________________

c. ______________________________

14. Match structures of the bones to the correct descriptions. Write the correct numbers in the blanks.

_____a. Layer of spongy bone found inside the compact bone, especially in the epiphysis; contains red marrow which produces red blood cells	1. Epiphysis 2. Epiphyseal cartilage
_____b. End of long bone	3. Cancellous bone 4. Articular cartilage
_____c. Layer of cartilage between the epiphysis and the diaphysis where growth takes place	5. Compact bone
_____d. Dense, hard layer of bone tissue just beneath the periosteum	6. Periosteum 7. Medullary cavity
_____e. Lining of the medullary cavity	8. Endosteum
_____f. Center of long bone	9. Diaphysis
_____g. Bone marrow cavity	
_____h. Exterior covering of bones, except in joints	
_____i. Covering of bones in joint areas	

15. Label structures of a typical long bone. Some answers may be used more than once.


a. ____________________
b. ____________________
c. ____________________
d. ____________________
e. ____________________
f. ____________________
g. ____________________
h. ____________________
i. ____________________
j. ____________________
k. ____________________

16. Describe major changes in bone development at various stages of the life cycle.

a. Embryo (approximately four months)-- ______________________________

____

____

b. Birth-five years--______________________________

____

____

c. Five-12 years-- ______________________________

____

____

d. 18-23 years-- ______________________________

____

____

e. 23-25 years-- ______________________________

____

____

17. Distinguish between types of bones. Write an "L" for long bones, an "S" for short bones, an "F" for flat bones, an "I" for irregular bones, and an "SD" for sesamoid bones.

_____a. Ankle

_____b. Radius

_____c. Hip

_____d. Tibia

_____e. Ribs

_____f. Humerus

_____g. Shoulder blade

_____h. Ulna

_____i. Face

_____j. Skull

_____k. Femur

_____l. Wrist

_____m. Patella

_____n. Fibula

_____o. Sternum

_____p. Spinal

18. List common bone markings.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

g. ______________________________

h. ______________________________

i. ______________________________

j. ______________________________

19. Distinguish between divisions of the skeleton. Write an "AX" for axial skeleton and an "AP" for appendicular skeleton.

_____a. Ribs and sternum

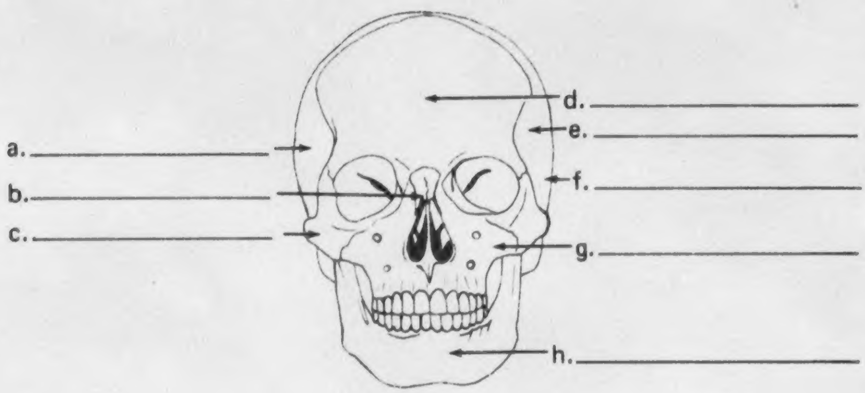
_____b. Upper extremities

_____c. Skull

_____d. Lower extremities

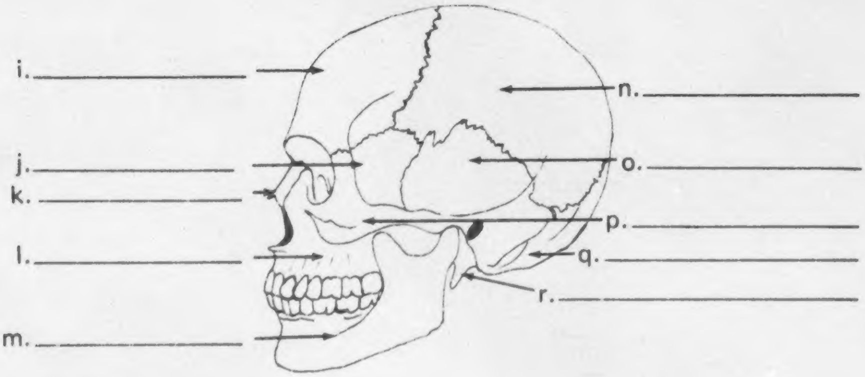
_____e. Vertebrae

20. Identify bones of the skull on the following diagrams. Write the correct names in the blanks.



Sphenoid
Zygomatic
Nasal
Maxillary

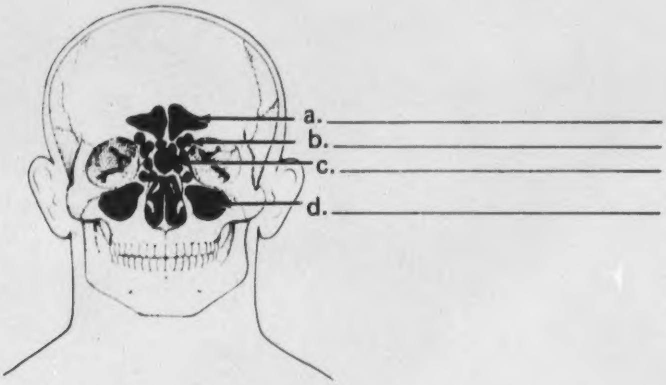
Frontal
Parietal
Temporal
Mandible



Frontal
Sphenoid
Maxillary
Mandible
Occipital

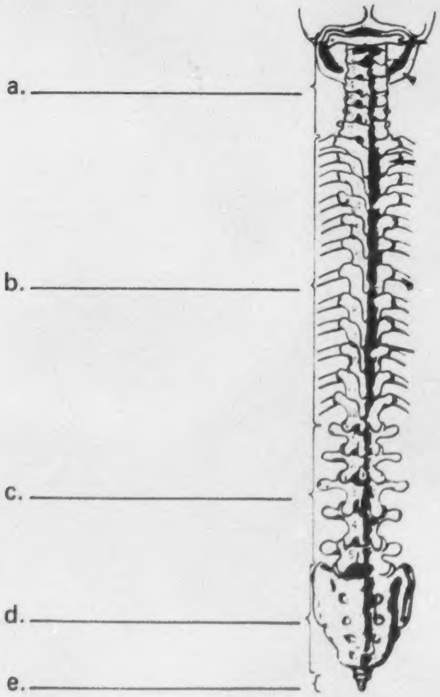
Parietal
Temporal
Zygomatic
Nasal
Styloid process

21. Label the sinuses found in the skull.

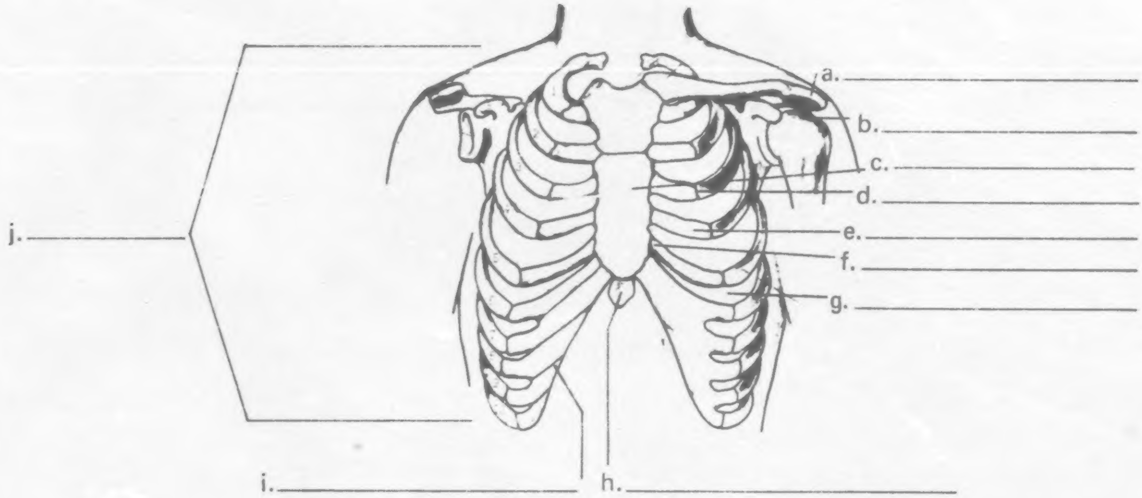


22. Identify regions of the spinal column on the following diagram. Write the correct words in the blanks.

Cervical Thoracic Lumbar
Sacral (sacrum) Coccygeal (coccyx)



23. Label the bones of the chest, upper back, and shoulder. Some answers may be used more than once.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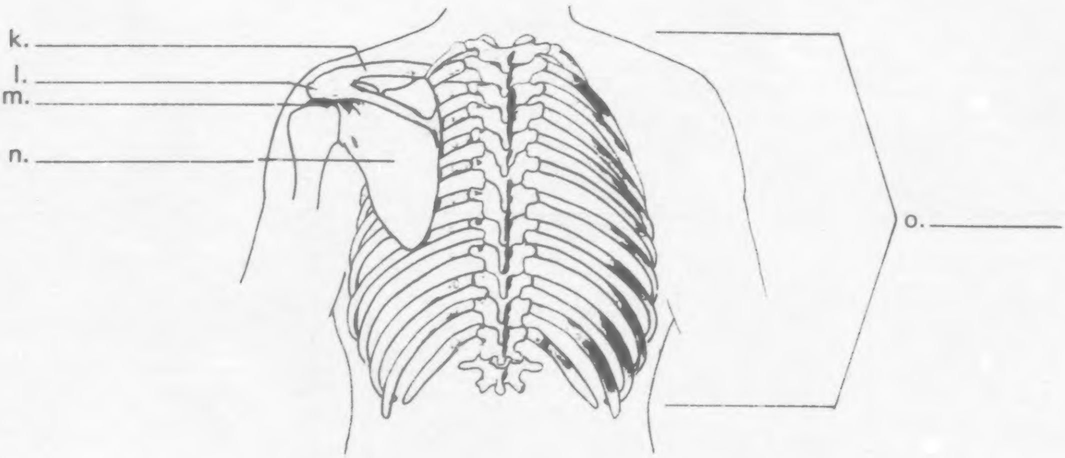


24. Match the names of the ribs to the correct descriptions. Write the correct numbers in the blanks.

_____a. Eighth, ninth, and tenth rib pairs; attach to the cartilage of the rib above

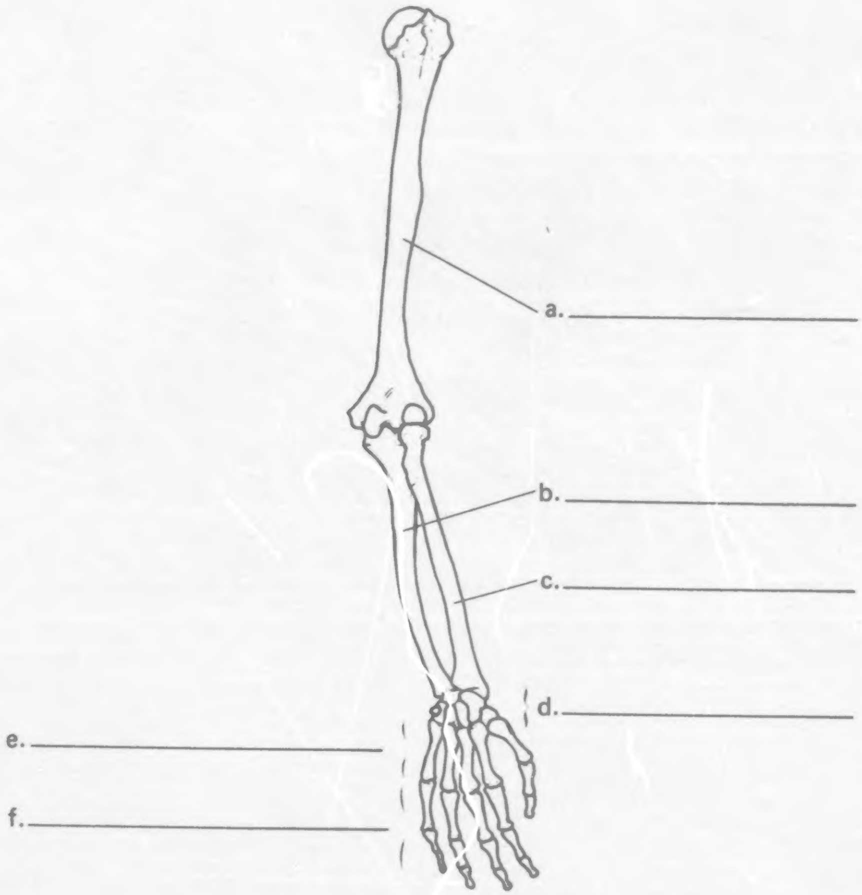
_____b. Upper seven; articulate directly with the sternum

_____c. Eleventh and twelfth ribs; anterior ends are completely unattached

_____d. Lower five pairs; join the sternum indirectly or not at all

1. True ribs
2. False ribs
3. Costal cartilages
4. Floating ribs

25. Label the bones of the arm and the hand on the following diagram.

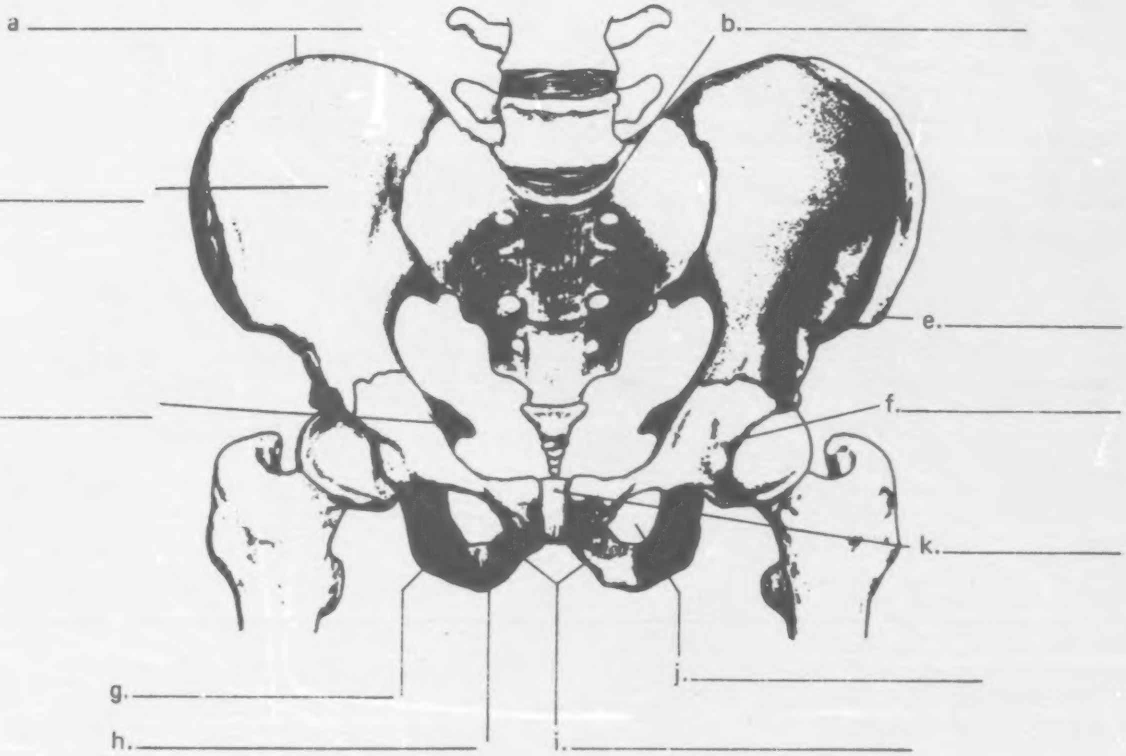


26. Identify the bones of the pelvis on the following diagram.

Iliac crest
Ischial spine
Ischium
Pubic arch

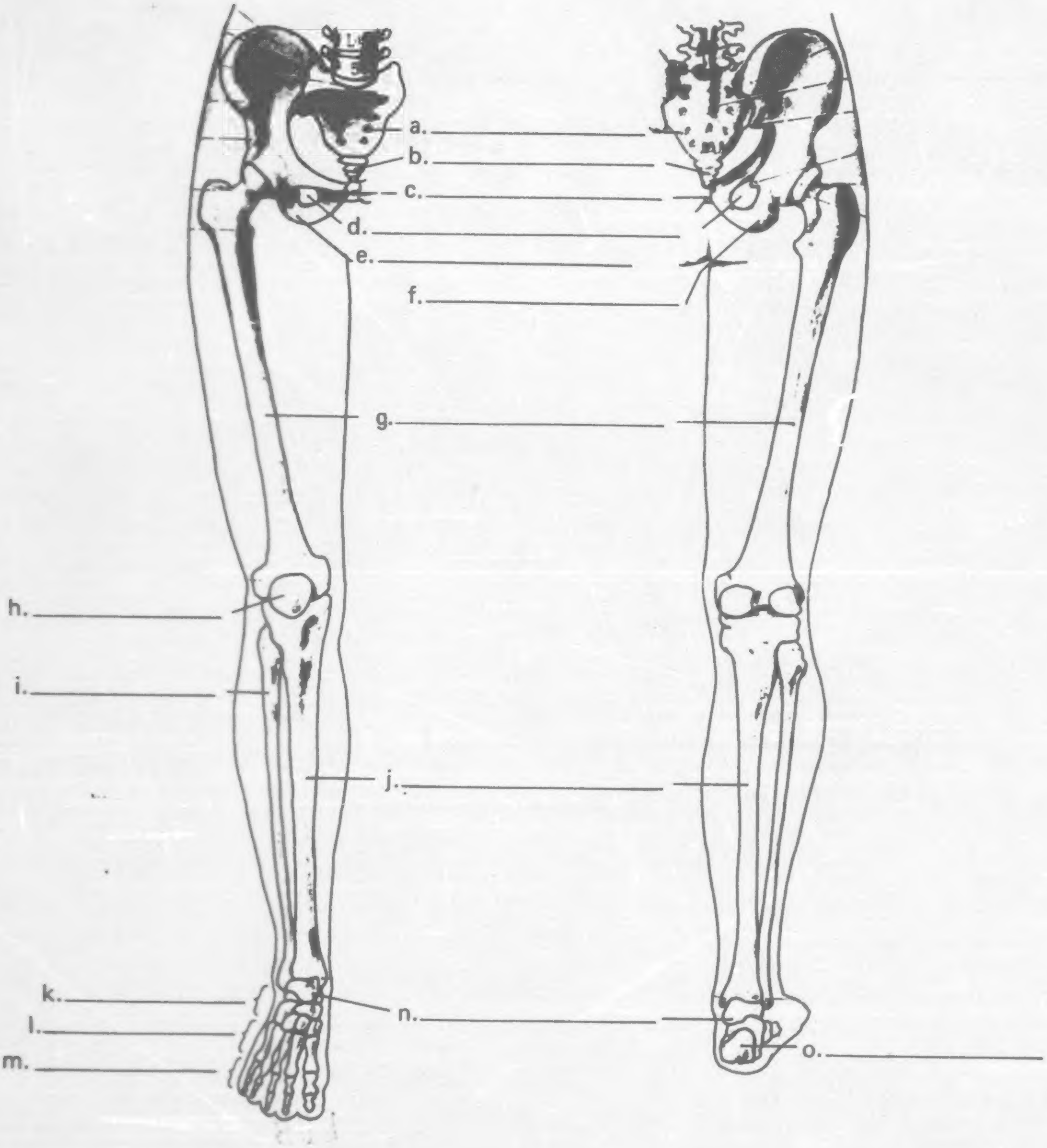
Sacrum
Anterior superior iliac spine
Pubis
Obturator foramen

Ilium
Acetabulum (socket for femur)
Symphysis pubis

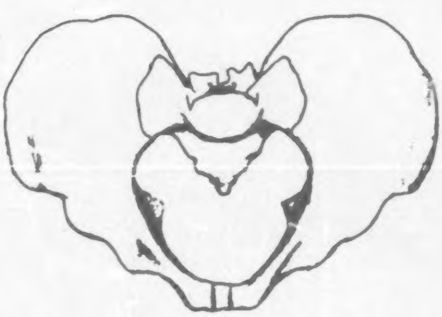


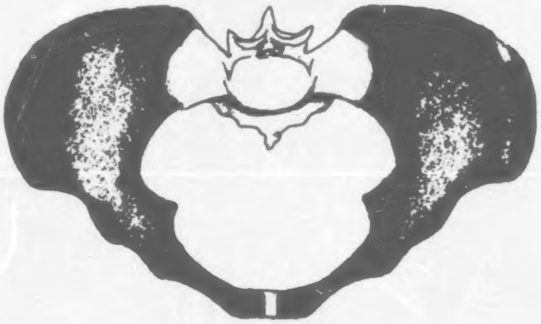
27. Identify the bones of the leg on the following diagram.

Sacrum
Obturator foramen
Femur
Tibia
Talus
Coccyx
Ischial ramus (inferior)
Patella (kneecap)
Tarsus
Calcaneum
Pubic symphysis
Ischial tuberosity
Fibula
Metatarsus
Phalanges



28. Distinguish between the male (android) and female (gynecoid) pelvis. Write the correct term in the blanks.





a. ______________________________ b. ______________________________

29. Classify joints according to the amount of movement. Place an "I" for immovable, an "S" for slightly movable, and an "F" for freely movable in the correct blanks.

______a. Symphysis pubis

______b. Skull sutures

______c. Knee and ankle joints

______d. Vertebral discs

______e. Shoulder joints

______f. Epiphyseal cartilage of the long bones

______g. Elbow, wrist, and finger joints

______h. Sacroiliac joints

30. Describe the types of freely movable joints.

a. Ball and socket joints-- ____

____

____

b. Hinge joints-- ____

____

____

c. Pivot joints-- ______________________________

d. Gliding joints-- ______________________________

31. Discuss the growth of bones.

32. Match terms associated with patient movement to the correct definitions. Write the correct numbers in the blanks. Definitions are continued on the next page.

______a. Loss or impairment of the ability to move parts of the body

______b. Abnormal shortening of a muscle, tendon, or scar tissue, producing deformity or distortion which may become permanent

______c. Lung inflammation caused by constantly remaining in the same position

______d. Low blood pressure which occurs upon assuming an erect position or upon prolonged standing

______e. Pertaining to the posterior surface of the knee

1. Contracture
2. Popliteal space
3. Orthopnea
4. Paralysis
5. Postural hypotension
6. Dependent edema
7. Hypostatic pneumonia

______f. Abnormal accumulation of fluid in the tissues, affecting most severely the lowermost portions of the body

______g. Respiratory condition in which breathing is possible only when the person sits or stands in an erect position

33. Select from the following list ways in which exercise promotes functioning of the patient's body. Write an "X" in the correct blanks.

______a. Stimulates appetite

______b. Preserves strength, tone, and elasticity of the muscles

______c. Helps decrease hypertension

______d. Reduces fatigue

______e. Helps produce more white blood cells

______f. Helps prevent contractures

______g. Helps maintain blood pressure, efficient circulation, and efficient respiration

______h. Relieves areas of pressure

______i. Reduces vertigo

______j. Aids in elimination

34. List factors which alter mobility.

a. ____

b. ____

c. ____

35. Select from the list effects of immobility. Write an "X" in the correct blanks.

______a. Changes in sensory function

______b. Enlargement of muscles

______c. Atrophy of muscles

______d. Changes in heart and circulatory functions

______e. Changes in behavior

______ f. Increased chances of acquiring a blood dyscrasia

______ g. Decrease of joint mobility

______ h. Decreased strength of respiratory muscles

______ i. Softening of the bony tissue

______ j. Impairment of nerve function

______ k. Increased susceptibility to diabetes

______ l. Changes in condition of skin and underlying tissues

______ m. Changes in metabolism

36. Match nursing measures to prevent or decrease effects of immobility to the correct descriptions. Write the correct numbers in the blanks.

______ a. Relieves pressure, relocates internal secretions, and promotes muscle and joint movement

______ b. Introduction of variety into the patient's environment to prevent boredom and provide interest

______ c. Natural body position and alignment aid in prevention of malfunctions

______ d. Patient should be assisted when needed and encouraged to exercise

1. Proper alignment of body
2. Changing position
3. Joint mobility exercises
4. Environmental structuring

37. List devices used for the therapeutic comfort of the patient confined to bed.

a. ______

b. ______

c. ______

d. ______

e. ______

f. ______

g. ______

h. ______

i. ______

j. ______

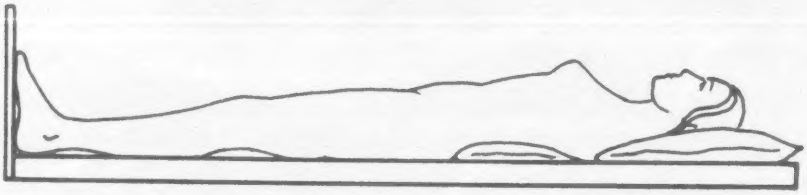
k. ______

l. ____

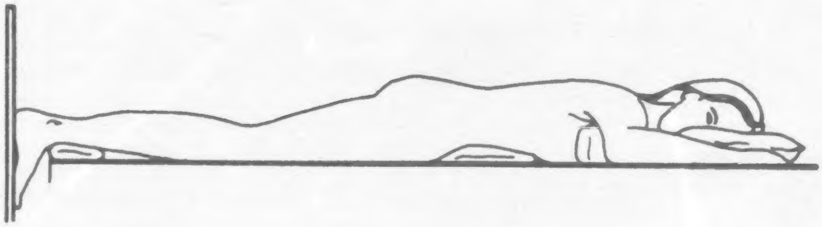
m. ____

n. ____

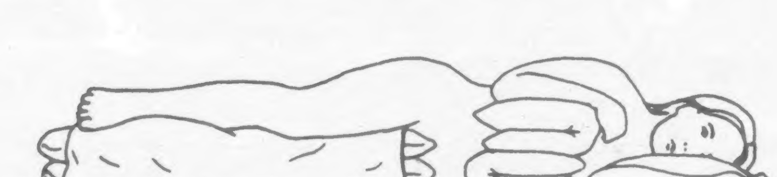
38. Label various body positions.



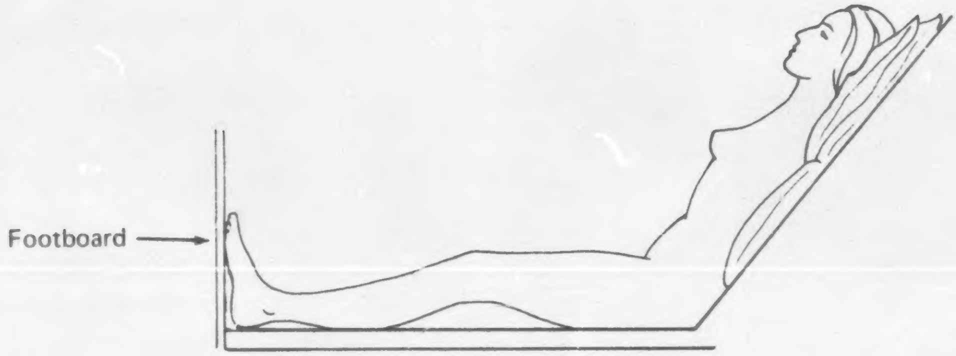
a. ____



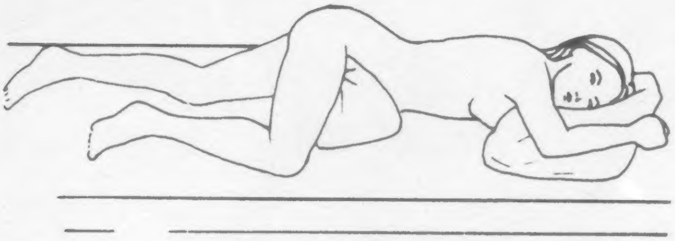
b. ____



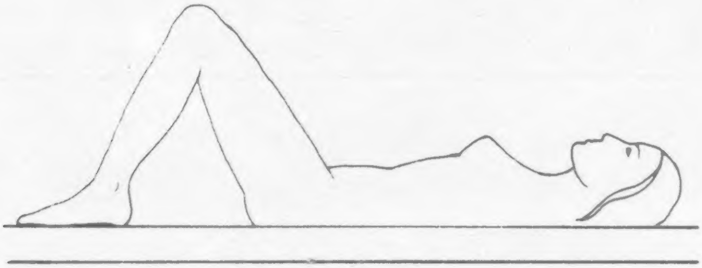
c. ____



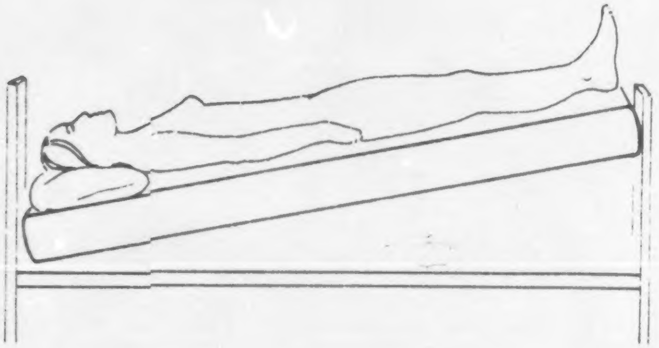
d. ______________________________



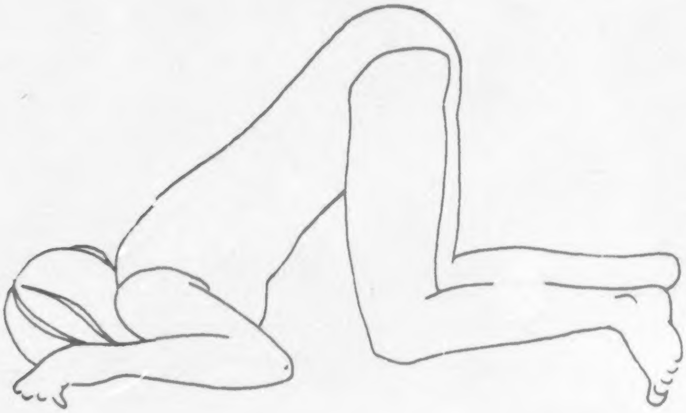
e. ______________________________



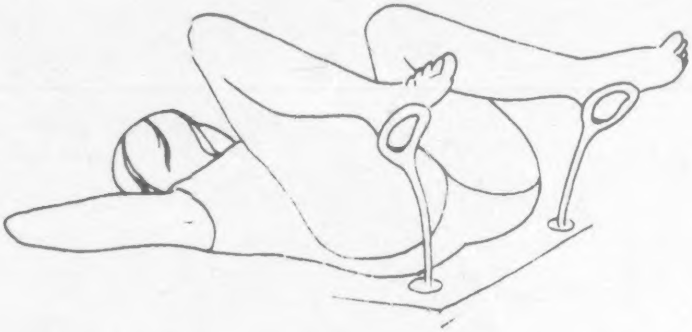
f. ______________________________



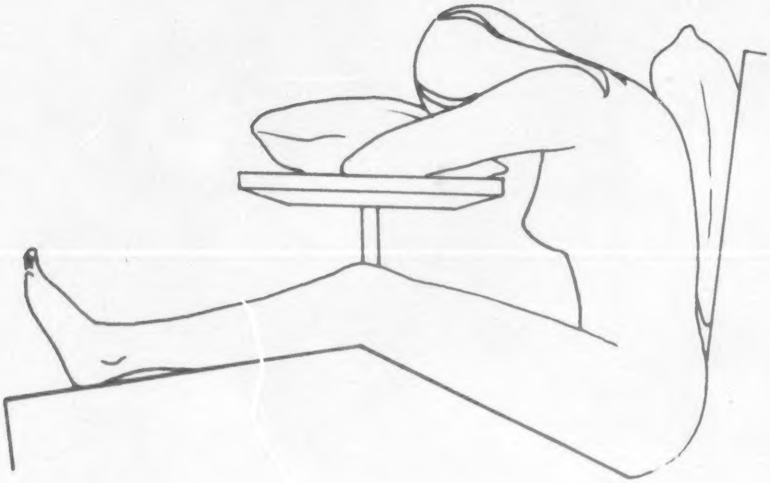
g. ____



h. ____



i. ____



j. ______________________________

39. Select from the following list common safety devices used for patients confined to bed. Write an "X" in the correct blanks.

______a. Wrist, arm, or leg restraints

______b. Electric alarm bell

______c. Side rails

______d. Mittens

______e. Alternating pressure mattresses

______f. Safety jacket-chest restraint

40. State precautions to observe when using devices that restrict movement.

a. ______________________________

____

____

b. ______________________________

____

____

c. ______________________________

____

____

d. ______________________________

____

____

e. ______________________________

____

____

f. ______________________________

____

____

g. ______________________________

____

____

h. ______________________________

____

____

41. Assess mobility.

42. Demonstrate the ability to:

    a. Position the patient.

    b. Use turn sheet.

    c. Apply restraints.

    d. Assist patient to dangle.

    e. Use patient lift.

    f. Get patient into chair and wheelchair.

    g. Assist patient to walk.

    h. Put patient on carrier.

(NOTE: If activities 41 and 42 have not been finished before the test, ask your instructor when they should be completed.)

MUSCULOSKELETAL SYSTEM AND PATIENT MOVEMENT
UNIT VII

ANSWERS TO TEST

1. a. 11
   b. 3
   c. 1
   d. 2
   e. 7
   f. 5
   g. 4
   h. 9
   i. 8
   j. 6
   k. 12
   l. 10
   m. 14
   n. 13
   o. 16
   p. 15
2. a. C
   b. SM
   c. SK
   d. C
   e. SK
   f. SM
   g. SM
   h. SK
   i. C
   j. SM
3. a. Origin
   b. Body or belly
   c. Insertion
4. a. 5
   b. 1
   c. 4
   d. 3
   e. 2
5. a, d, e, g

6. a. Adduction moves toward a part or midline
   b. Abduction moves away from a part
   c. Extension straightens a joint
   d. Flexion bends a joint
   e. Inversion turns a part inward
   f. Eversion turns a part outward
   g. Elevation lifts a part
   h. Depression lowers a part
   i. Rotation moves a part around an axis
   j. Pronation moves the hand so that the palm is down
   k. Supination moves the hand so that the palm is up

7. a. Action
   b. Shape
   c. Origin and insertion
   d. Division number
   e. Direction of fibers

8. a. Head and neck
      1) Temporalis
      2) Sternocleidomastoid
      3) Trapezius
      4) Frontalis
      5) Orbicularis oculi
      6) Nasalis
      7) Quadratus labii superioris
      8) Zygomaticus
      9) Orbicularis oris
      10) Quadratus labii inferioris
      11) Mentalis
      12) Triangularis
      13) Buccinator
      14) Digastricus
      15) Masseter

b. Chest and arm
  1) Deltoid
  2) Pectoralis major
  3) Serratus anterior
  4) Biceps brachii
  5) Brachioradialis
  6) Flexor carpi
  7) Extensor carpi
  8) Intercostals

c. Back
  1) Teres minor
  2) Teres major
  3) Latissimus dorsi
  4) Lumbodorsal fascia
  5) Sternocleidomastoid
  6) Trapezius
  7) Deltoid
  8) Triceps

d. Abdomen
  1) External oblique
  2) Intercostals
  3) Internal oblique
  4) Rectus abdominis

e. Buttocks and posterior leg
  1) Gluteus medius
  2) Gluteus maximus
  3) Biceps femoris
  4) Gastrocnemius
  5) Achilles tendon
  6) Soleus

f. Anterior leg
  1) Adductor longus
  2) Rectus femoris
  3) Peroneus longus
  4) Tibialis anterior
  5) Sartorius
  6) Quadriceps femoris
  7) Gastrocnemius
  8) Soleus

9. a. 4
b. 9
c. 1
d. 5
e. 8
f. 2
g. 6
h. 3
i. 10
j. 7

10. Descriptions should include the following under each heading:

    a. Skeletal muscle

        1) Brain signals arrive at the junction of nerve and muscle at the motor end plate

        2) Muscle fibers glide toward each other and mesh, causing muscle to shorten and contract

        3) Acetylcholine is released when brain signals reach nerve-muscle junction, acting as excitants to put the muscle membrane on alert

        4) Breakdown of ATP occurs to supply the muscle with energy

        5) Contraction itself is then begun by the release of calcium from the muscle membrane

        6) Relaxation takes place as calcium is released, then stored up between the muscle fibrils

    b. Cardiac muscle

        1) Cardiac muscles usually initiate their own contractions from the autonomic nervous system

        2) Contraction of the sheet of cardiac muscle involves all the cells, but the strength of the contraction is related, like skeletal muscle, to the original length of the fibers and is influenced by the autonomic nerves

    c. Smooth muscle

        1) Smooth muscle forms with other tissues, often in sheets of parallel fibers

        2) Contractions are stimulated by nerves of the autonomic nerve fibers

        3) Can be contracted for long periods without additional energy, unlike the skeletal muscles

11. a. 4
    b. 1
    c. 6
    d. 8
    e. 2
    f. 7
    g. 5
    h. 3
    i. 9
    j. 13
    k. 10
    l. 11
    m. 14
    n. 12
    o. 15
    p. 16
    q. 17
    r. 23
    s. 22
    t. 19
    u. 21
    v. 20
    w. 24
    x. 18

12. b, c, f, g, h

13. a. Inorganic salts, such as calcium phosphate
    b. Organic materials, such as bone cells, blood vessels, nerves, and cartilage
    c. Water

14. a. 3
    b. 1
    c. 2
    d. 5
    e. 8
    f. 9
    g. 7
    h. 6
    i. 4

15. a. Articular cartilage
    b. Red marrow
    c. Cancellous bone
    d. Compact bone
    e. Medullary cavity
    f. Yellow marrow
    g. Periosteum
    h. Articular cartilage
    i. Epiphysis
    j. Diaphysis
    k. Epiphysis

16. Description should include:
    a. Embryo (approximately four months)--Most of the centers have appeared in the diaphyses of the bones
    b. Birth-five years--Secondary ossification centers appear in the ephiphyses; the cranium grows rapidly during early childhood; and the two vertebral curves develop
    c. Five-12 years--Ossification rapidly spreads from the centers; various bones begin to harden; facial bones grow slowly
    d. 18-23 years--Bones in the upper limbs become completely ossified and the pelvis becomes relatively larger and wider in the female
    e. 23-25 years--Bones of the lower limbs and os coxae are completely hardened and the sternum, clavicles, and vertebrae are completely hardened

17. a. S
    b. L
    c. I
    d. L
    e. F
    f. L
    g. F
    h. L
    i. I
    j. F

k. L
l. S
m. SD
n. L
o. F
p. I

18. a. Condyle
b. Fossa
c. Head
d. Process
e. Tuberosity
f. Trochanter
g. Notch
h. Sinus
i. Foramen
j. Crest

19. a. AX
b. AP
c. AX
d. AP
e. AX

20. a. Sphenoid
b. Nasal
c. Zygomatic
d. Frontal
e. Parietal
f. Temporal
g. Maxillary
h. Mandible
i. Frontal
j. Sphenoid
k. Nasal
l. Maxillary
m. Mandible
n. Parietal
o. Temporal
p. Zygomatic
q. Occipital
r. Styloid process

21. a. Frontal sinus
b. Ethmoid sinus
c. Sphenoid sinus
d. Maxillary sinus

22. a. Cervical
    b. Thoracic
    c. Lumbar
    d. Sacral (sacrum)
    e. Coccygeal (coccyx)

23. a. Acromial process
    b. Head of humerus
    c. Sternum
    d. Costochondral joint
    e. Costal cartilage
    f. Sternochondral joint
    g. Intercostal space
    h. Xiphoid process
    i. Costal margin
    j. Ribs
    k. Clavicle
    l. Acromial process
    m. Head of humerus
    n. Scapula
    o. Ribs

24. a. 3
    b. 1
    c. 4
    d. 2

25. a. Humerus
    b. Ulna
    c. Radius
    d. Carpals
    e. Metacarpals
    f. Phalanges

26. a. Iliac crest
    b. Sacrum
    c. Ilium
    d. Ischial spine
    e. Anterior superior iliac spine
    f. Acetabulum (socket for femur)
    g. Ischium
    h. Pubis
    i. Pubic arch
    j. Obturator foramen
    k. Symphysis pubis

27. a. Sacrum
    b. Coccyx
    c. Pubic symphysis
    d. Obturator foramen
    e. Ischial ramus (inferior)
    f. Ischial tuberosity
    g. Femur
    h. Patella (kneecap)
    i. Fibula
    j. Tibia
    k. Tarsus
    l. Metatarsus
    m. Phalanges
    n. Talus
    o. Calcaneum

28. a. Male
    b. Female

29. a. S
    b. I
    c. F
    d. S
    e. F
    f. I
    g. F
    h. S

30. Description should include the following under each heading:

    a. Ball and socket joints
        1) Head of one bone fits into a cup-like socket of another bone
        2) Movement takes place in all planes, plus rotation

    b. Hinge joints
        1) Spool-shaped surface fits into a concave surface
        2) Movement consists of flexion and extension and is limited by structure of the joint and by ligaments

    c. Pivot joints
        1) Arch-shaped surface surrounds a peg-like pivot
        2) Only movement is rotation

    d. Gliding joints
        1) One bony surface glides upon another
        2) No angular or rotary movement

31. Discussion should include:

    a. At birth, bones are soft cartilage and gradually mature and grow in size

    b. As bones mature, calcium phosphate is deposited in the cartilage and long fibers

    c. Large amounts of calcium, phosphorus, and Vitamin D are required for bone growth

    d. To prevent bones from becoming completely solid, an orderly tearing-down process takes place at all times in the medullary cavity

    e. Every bone has an inner space for bone marrow

        1) To manufacture blood cells

        2) To aid in the nourishment of the bone itself

        3) To prevent the bone from being too heavy

32. a. 4

    b. 1

    c. 7

    d. 5

    e. 2

    f. 6

    g. 3

33. a, b, d, f, g, h, j

34. a. Loss or decrease through disease or injury

    b. External conditions

    c. Voluntary response

35. a, c, d, e, g, h, i, j, l, m

36. a. 2

    b. 4

    c. 1

    d. 3

37. a. Mattress variations
    b. Cradle
    c. Footboard or footblock
    d. Bedboard or fracture board
    e. Balkan or overhead frame
    f. Bradford frame
    g. Air rings or cushions
    h. Elbow or heel protectors
    i. Sponge rubber pads or small pillows
    j. Sandbags
    k. Sheepskin
    l. Alternating pressure mattress
    m. Flotation pads
    n. Egg-crate mattress

38. a. Horizontal recumbent or supine
    b. Prone
    c. Lateral
    d. Fowler's
    e. Sim's or semi-prone
    f. Dorsal recumbent
    g. Trendelenburg
    h. Knee-chest
    i. Lithotomy
    j. Orthopneic

39. a, c, d, f

40. a. When side rails are being used, go no further than an arm's length from the bed without raising the side rails
    b. Make the patient as comfortable as possible with good body alignment before applying any restraining device

- c. Pad all restraining appliances carefully to avoid pressure and chafing; watch to see that the padding does not slip out of place
- d. Loosen restraining devices every two hours and change patient's position
- e. Watch circulation of restrained limbs closely; circulation may be impaired if the limb is restrained improperly or too tightly
- f. Check pulse and respirations frequently to see that respirations and circulation are not hampered
- g. When lock-type restraints are used, the keys must be kept in a designated place readily available to personnel
- h. In most institutions, restraining devices are used upon the order of the attending physician or when, in the judgment of the charge nurse, they become necessary

41. Evaluated to the satisfaction of the instructor

42. Performance skills evaluated to the satisfaction of the instructor

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of the digestive system to assist patients in regulating and maintaining the health of these organs. The student should also be able to demonstrate skills that aid the patient in elimination. This knowledge will be evidenced by completion of assignment sheet, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the digestive system to the correct definitions.
2. Identify the parts of a tooth and adjacent structures on a diagram.
3. Label the structures of the mouth.
4. Select from a list the salivary glands.
5. Label the liver, pancreas, and adjacent structures.
6. Distinguish between functions of the liver, gallbladder, and pancreas.
7. Identify the digestive organs.
8. Distinguish between mechanical and chemical digestion.
9. List enzymes produced in the mouth, stomach, and small intestine, and their purposes.
10. Select from a list functions of the esophagus.
11. Identify parts of the stomach.
12. Select from a list functions of the stomach.
13. Match components of gastric juice to their functions.
14. Identify parts of the small intestine and large intestine.
15. Distinguish between functions of the small and large intestine.
16. Match terms associated with metabolism to the correct definitions.
17. Select from a list factors which affect the basal metabolism rate (BMR).
18. List factors that affect energy requirements.

19. Arrange in order steps used to compute calorie requirements.
20. Match terms associated with elimination in the digestive system to the correct definitions.
21. Describe the mechanism of rectal reflex.
22. List factors that inhibit elimination in the hospital setting.
23. Select from a list nursing measures that will aid elimination.
24. List sources of cellulose.
25. List characteristics of defecation to observe.
26. Distinguish between types of enemas.
27. Calculate calories.
28. Demonstrate the ability to:
    - a. Give and remove a bedpan and/or fracture pan.
    - b. Assist the patient to the bathroom.
    - c. Assist the patient in using the commode.
    - d. Collect a stool specimen.
    - e. Give a cleansing enema.
    - f. Give a retention enema.
    - g. Give a Harris flush/colonic irrigation.
    - h. Insert a colon tube.
    - i. Insert a rectal suppository.
    - j. Remove a fecal impaction.

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

  A. Provide students with objective sheet.

  B. Provide students with information sheet and make transparencies.

  C. Discuss unit and specific objectives.

  D. Discuss information sheet.

  E. Use models to show anatomy.

  F. Dissect animal organs for a more realistic look at the anatomy of the digestive system.

  G. Invite dental hygienist to speak to class on care of the mouth and teeth.

  H. Provide students with assignment sheet.

  I. Provide students with additional sources to complete assignment sheet.

  Examples: Nutrition texts with ideal weight charts, calorie charts

  J. Provide students with job sheets.

  K. Show equipment and demonstrate skills in job sheets.

  L. Allow return demonstration time for students in clinical lab setting.

  M. Give test.

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

  C. Transparency masters

    1. TM 1--Deciduous Teeth and Permanent Teeth

    2. TM 2–The Digestive Organs

    3. TM 3--Structure of the Villi

  D. Assignment Sheet #1--Calculate Calories

E. Job sheets

1. Job Sheet #1--Give and Remove a Bedpan and/or Fracture Pan
2. Job Sheet #2--Assist the Patient to the Bathroom
3. Job Sheet #3--Assist the Patient in Using the Commode
4. Job Sheet #4--Collect a Stool Specimen
5. Job Sheet #5--Give a Cleansing Enema
6. Job Sheet #6--Give a Retention Enema
7. Job Sheet #7--Give a Harris Flush/Colonic Irrigation
8. Job Sheet #8--Insert a Colon Tube
9. Job Sheet #9--Insert a Rectal Suppository
10. Job Sheet #10--Remove a Fecal Impaction

F. Test

G. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study.* Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/ Curriculum and Instructional Materials Center, 1974.

B. Sloan, Jamee. *Health Service Careers.* Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1979.

C. Sloan, Jamee. *Medical Assistant.* Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1981.

D. Memmler, Ruth, and Wood, Dena Lin. *The Human Body in Health and Disease.* Philadelphia: J.B. Lippincott Company, 1977.

IV. Additional references:

A. Jacob, Stanley; Francone, Clarice; and Lossow, Walter. *Structure and Function in Man.* Philadelphia: W.B. Saunders Company, 1978.

B. Thomas, Virginia. *Life Sciences for Nursing and Health Technologies.* Long Beach, California: Technicourse, 1977.

V. Films:

(NOTE: The following films are available on a free-loan basis to Oklahoma teachers *only* from the Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order from the addresses listed.)

A. *Teeth.* Color, 12 min., Films Inc., 1972. Available from Films Inc., National Sales Office, 733 Green Bay Road, Wilmette, Illinois 60091.

B. *Digestive System.* Color, 12 min., Films Inc., 1972. Available from Films Inc., National Sales Office, 733 Green Bay Road, Wilmette, Illinois 60091.

C. *I Am Joe's Stomach.* Color, 26 min., Pyramid Films, 1975. Available from Pyramid Films, Box 1048, Santa Monica, California 90406.

D. *Your Mouth.* Color, 16 min., BFA Educational Media, 1972. Available from BFA Educational Media, 2211 Michigan Avenue, Santa Monica, California 90404.

VI. Filmstrips:

(NOTE: The following filmstrips are available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.)

A. *Bowel Elimination.*

B. *Cleansing Enema.*

C. *Physiology of the Upper Gastrointestinal Tract.*

D. *Physiology of the Lower Gastrointestinal Tract.*

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

INFORMATION SHEET

I. Terms associated with the digestive system

A. Gastroenterology--Study of the digestive system

B. Digestion--Mechanical and chemical breakdown of complex foodstuffs into simpler substances which are absorbed into the blood and lymph systems or eliminated from the body

(NOTE: Foods that are broken down through the digestive process are broken down into elements for the body to use. Waste, consisting of undigested foods, bacteria, mucus, and water, is eliminated. Three types of food substances can be digested--carbohydrates, fats, and proteins.)

C. Peristalsis--Rhythmical waves of contraction which move the food along the digestive tract

D. Mucus--Thick, sticky fluid secreted by some membranes and glands

E. Chyme--Nearly liquid mixture of partly digested food and digestive secretions found in the stomach and small intestine

F. Intrinsic factor--Mucoprotein found in gastric juice; necessary for the assimilation of vitamin B_{12}

G. Villi--Short, vascular, threadlike projections covering the mucous membrane of the small intestine

H. Sphincter--Ringlike muscle fibers which control an outlet, permitting it to open and close

I. Diaphragm--Muscular membrane that separates the abdominal cavity from the thoracic cavity

J. Fibrinogen--Protein in the blood which aids in clotting

K. Albumin--One of the simple proteins

L. Toxin--Any poisonous substance of microbic, vegetable, mineral, or animal origin

M. Cholesterol--Organic, fatlike compound found in animal fat, bile, blood, brain tissue, liver, and other parts of the body

N. Antibody--Protein substance in the blood developed by the body, usually in reaction to a specific foreign substance

O. Feces--Body waste, such as food residue, bacteria, epithelium, and mucus, discharged from the intestines

INFORMATION SHEET

P. Carbohydrates--Starches and sugars

Q. Hormones--Chemical substances, secreted by an endocrine gland, which regulate the functions of other organs

R. Exocrine--External secretion of a gland

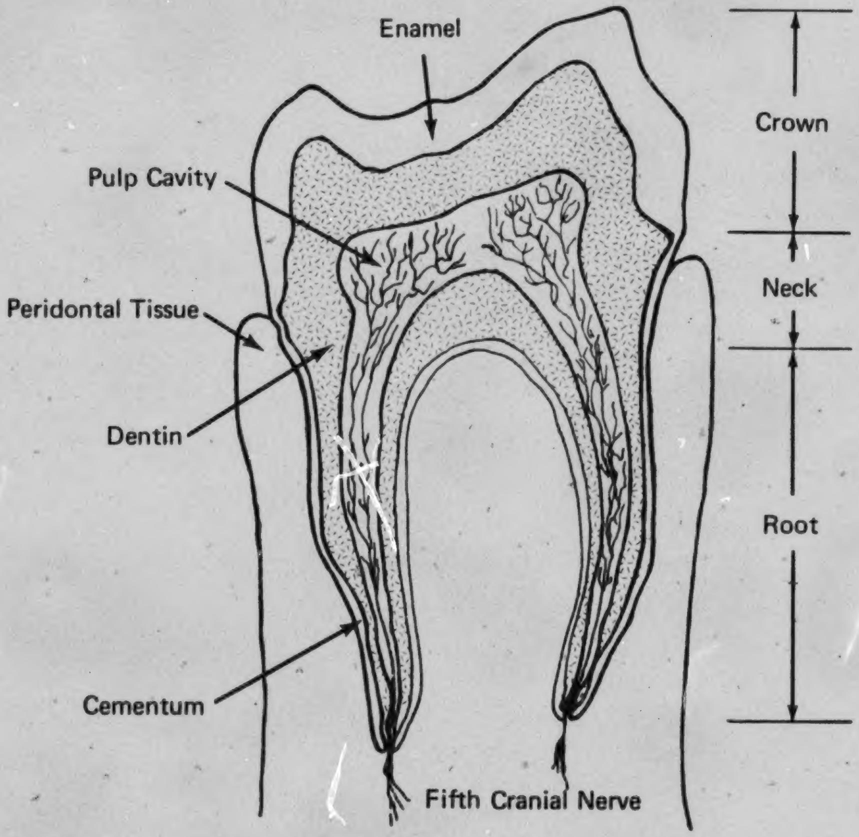
S. Alimentary canal--Organs which are part of the tube extending from mouth to rectum

T. Endocrine--Internal secretion of a gland

II. Parts of a tooth and adjacent structures (Transparency 1)

(NOTE: There are two sets of teeth that develop. The deciduous or baby teeth [20] appear at approximately the sixth month; then the permanent teeth [32] replace the deciduous teeth. The teeth are shaped according to their functions.)

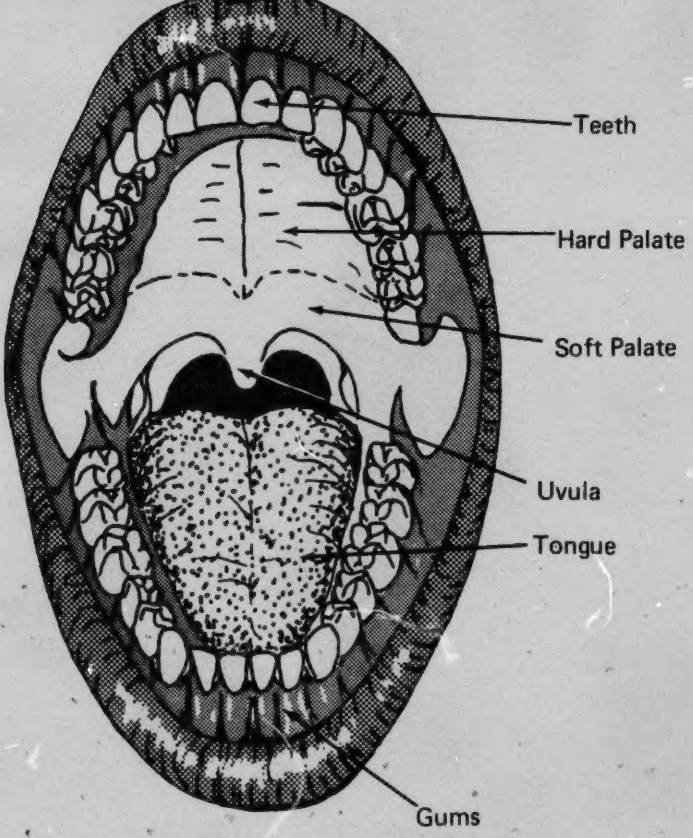
Examples: Incisors-cutting; cuspids-tearing; bicuspids-crushing and grinding; molars-crushing and grinding


Enamel
Crown
Pulp Cavity
Neck
Peridontal Tissue
Dentin
Root
Cementum
Fifth Cranial Nerve

INFORMATION SHEET

III. Structures of the mouth

(NOTE: The mouth functions by softening, chewing, and mixing food with saliva. This process begins digestion and changes some starches to sugars.)


Teeth
Hard Palate
Soft Palate
Uvula
Tongue
Gums

IV. Salivary glands

(NOTE: The salivary glands secrete about 1,500 cc of saliva each day that aid in moistening food, chewing, swallowing, and changing starches to sugar.)

A. Parotid

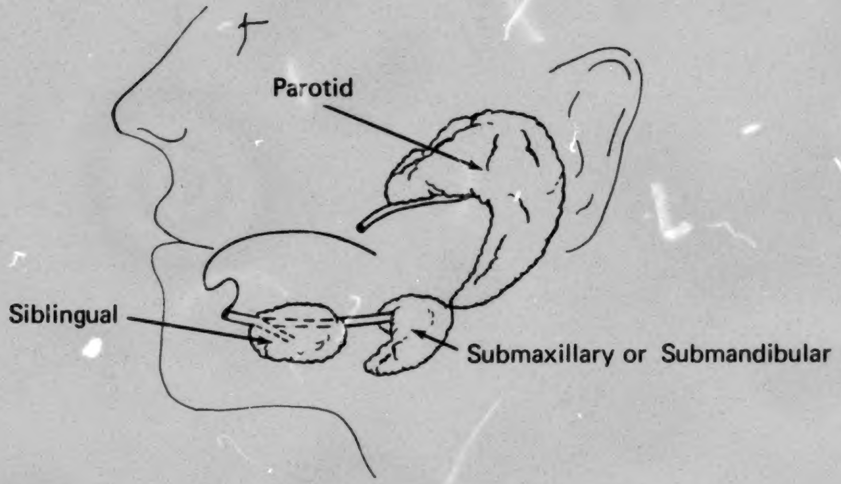
B. Sublingual

INFORMATION SHEET

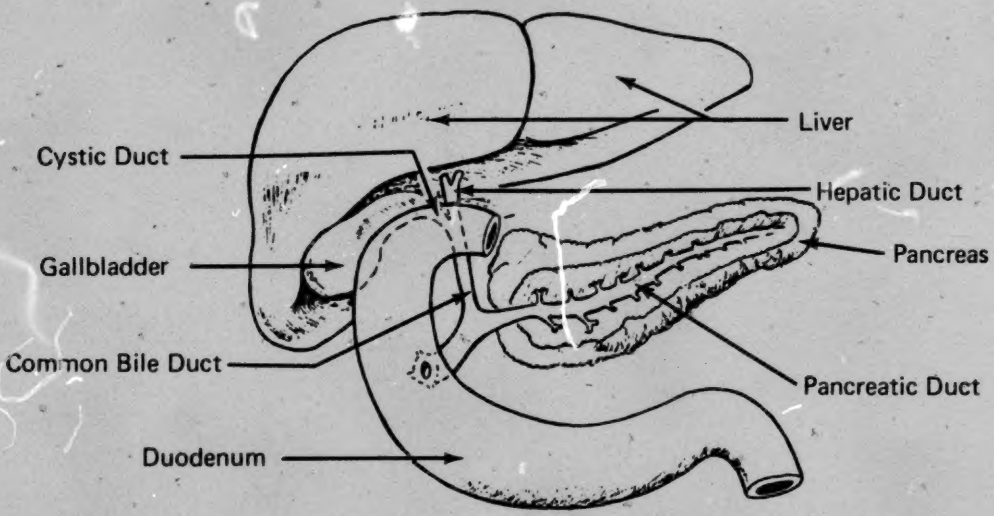
C. Submaxillary

(NOTE: This gland is also known as the *submandibular*.)

Example:


Parotid
Siblingual
Submaxillary or Submandibular

V. Liver, pancreas, and adjacent structures


Liver
Cystic Duct
Hepatic Duct
Pancreas
Gallbladder
Common Bile Duct
Pancreatic Duct
Duodenum

INFORMATION SHEET

VI. Functions of the liver, gallbladder, and pancreas

A. Liver

(NOTE: The liver is the largest organ in the body. It weighs approximately three pounds and is made up of two major lobes. It lies directly under the diaphragm, on the right side.)

1. Metabolizes carbohydrates, fats, and proteins
2. Manufactures blood proteins
3. Removes toxins, bacteria, and worn-out blood cells
4. Removes waste products from the blood
5. Manufactures cholesterol
6. Stores vitamins A, D, K, and B_{12}
7. Forms antibodies
8. Stores simple sugars
9. Manufactures bile which aids in metabolism of fats

B. Gallbladder--Stores bile until needed for digestion

C. Pancreas

1. Produces pancreatin, an exocrine secretion which is emptied into the duodenum
2. Produces insulin, an endocrine secretion which aids in carbohydrate metabolism

VII. Digestive organs (Transparency 2)

A. Oral cavity (mouth)

B. Sublingual gland

C. Submaxillary gland

D. Parotid gland

E. Pharynx

F. Epiglottis

G. Esophagus

INFORMATION SHEET

H. Stomach

(NOTE: The stomach absorbs alcohol, some drugs, and small amounts of water and glucose.)

I. Liver

J. Gallbladder

K. Hepatic flexure

L. Pancreas

M. Splenic flexure

N. Small intestine

O. Large intestine (colon)

(NOTE: The three parts of the colon are ascending, transverse, and descending.)

1. Cecum
2. Sigmoid
3. Rectum
4. Anal canal

P. Appendix

VIII. Mechanical and chemical digestion (Transparency 3)

A. Mechanical digestion

1. Breaks foods into smaller particles
2. Moistens and mixes food with digestive juices
3. Moves food along the digestive tract
4. Begins in the mouth with chewing and continues along the alimentary tract with swallowing in the esophagus and peristalsis in the stomach and small intestine
5. Muscles in the tongue, jaw, pharynx, esophagus, stomach, and intestines furnish the needed power
6. Chyme is absorbed through the villi in the small intestine into the blood and lymph systems

INFORMATION SHEET

B. Chemical digestion

  1. Digestive juices and enzymes cause chemical changes in the food
  2. Carbohydrates are changed to simple sugars in the mouth and small intestine
  3. Fats are turned into fatty acids in the stomach and small intestine
  4. Proteins are changed into amino acids in the stomach and small intestine

IX. Enzymes produced in the mouth, stomach, and small intestine, and their purposes

A. Mouth--Ptyalin in saliva begins digestion of starches

B. Stomach--Gastric juice including hydrochloric acid

  1. Pepsin begins digestion of proteins
  2. Lipase acts upon emulsified fats
  3. Rennin acts upon milk protein

C. Small intestine

  1. Bile from liver emulsifies fats

     (NOTE: Bile is not an enzyme but is essential to digestion of fats.)

  2. Trypsin from pancreas digests proteins
  3. Amylopsin from pancreas digests starches
  4. Steapsin from pancreas digests fats
  5. Erepsin from intestinal lining digests proteins
  6. Lactase, maltase, and sucrase digest sugars

X. Functions of the esophagus

A. Serves as tubular passageway for food from mouth to stomach

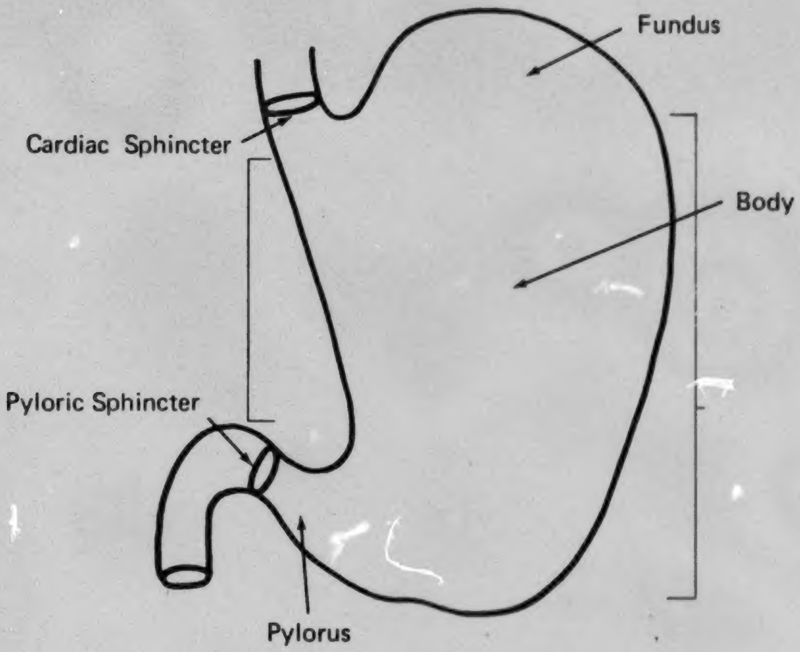
B. Secretes mucus to aid in food movement

C. Peristalsis begins

D. Epiglottis prevents food from entering the trachea

INFORMATION SHEET

XI. Parts of the stomach



XII. Functions of the stomach

A. Prepares food for digestion by changing it from a solid to a semi-fluid material (chyme) by peristalsis

B. Serves as a reservoir for food for the three or four hours needed for proper mixing

C. Secretes approximately 2000 cc of gastric juice per day

D. Begins digestion of proteins

XIII. Components of gastric juice

A. Mucin--Mixture of proteins in mucus that protects the lining of the stomach

B. Water--A solvent

C. Enzymes--Act chemically to aid digestion

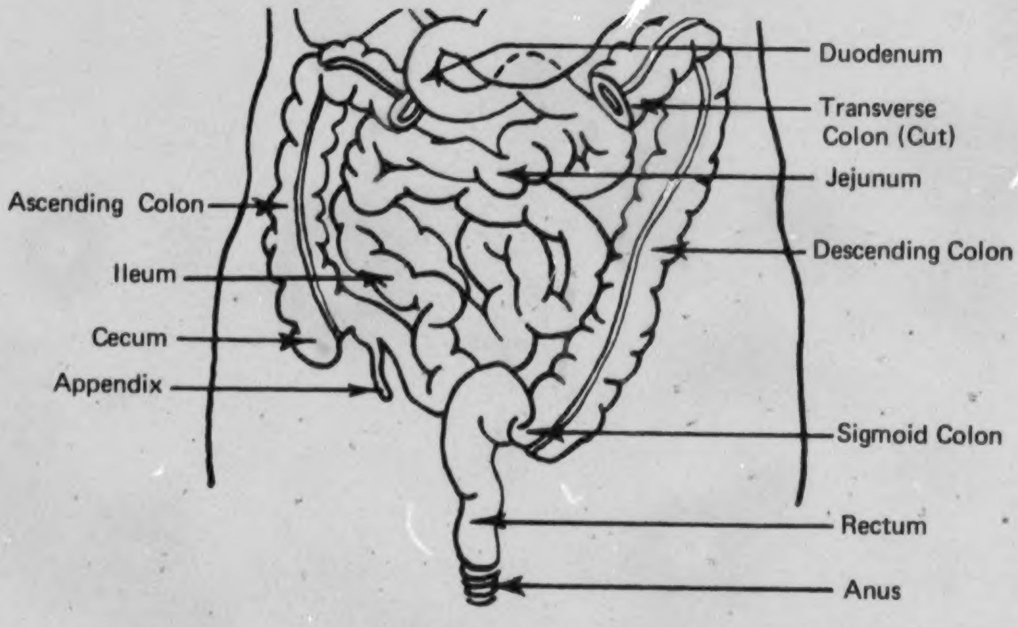
D. Intrinsic factor--Essential in absorption of vitamin B_{12}

INFORMATION SHEET

E. Hydrochloric acid

1. Softens connective tissue in meat
2. Kills bacteria
3. Aids in absorption of iron
4. Activates at least one of the stomach enzymes

XIV. Parts of the small intestine and large intestine


Duodenum
Transverse Colon (Cut)
Jejunum
Ascending Colon
Descending Colon
Ileum
Cecum
Appendix
Sigmoid Colon
Rectum
Anus

INFORMATION SHEET

XV. Functions of the small and large intestine

A. Small intestine

(NOTE: The small intestine is approximately one inch [2.54 cm] in diameter, 20 feet [6.01 meters] in length and is divided into the duodenum, jejunum, ileum, and ileocecal sphincter. It absorbs approximately 90 percent of nutrients.)

1. Empties bile from the liver and pancreatic juice into the duodenum
2. Secretes intestinal juices
3. Digests and absorbs greater part of food

B. Large intestine

1. Reabsorbs water, mineral salts, and vitamins
2. Provides a site for bacteria which produce Vitamin K and other bacteria that aid in absorption
3. Secretes mucus to aid in the movement of feces

XVI. Terms associated with metabolism

A. Metabolism--Chemical process in organisms which turns food substances into heat and energy for body use

B. Anabolism--Process of building, maintaining, and repairing tissue

C. Catabolism--Process of breaking down complex substances into simple substances for excretion and energy production

D. Basal metabolism rate--Measurement of oxygen needed when the body is at rest and performing only necessary functions

E. Calorie--Unit used to measure fuel value of food

F. Basal metabolism--Amount of energy needed to sustain life

XVII. Factors which affect the basal metabolism rate (BMR)

A. Internal secretions

(NOTE: Secretions of the thyroid and adrenal glands affect basal metabolism rate. Usually hyperthyroidism causes an increase, and hypothyroidism causes a decrease in rate. An emotional state that stimulates secretions of the endocrine glands could increase the rate of body processes and give an incorrect reading in the BMR test.)

INFORMATION SHEET

B. Age

(NOTE: Children have a higher BMR than adults. In older persons there is a marked decrease.)

C. Body shape and size

(NOTE: A tall, thin person has a higher BMR than a short, fat person.)

D. Sex

(NOTE: Women usually have a lower BMR than men.)

E. Emotional stress

XVIII. Factors that affect energy requirements

A. Physical activity

B. Age

C. Size

D. Sex

E. Endocrine secretions

F. Body temperature

G. Medications

H. Emotions

I. External climate

J. Sleep

K. Nutrition

L. Pregnancy

XIX. Steps used to compute calorie requirements (Assignment Sheet #1)

A. Determine ideal weight for height and body build

(NOTE: Tables giving desirable weights and heights for adults are usually found in nutrition textbooks.)

B. Determine calories needed

(NOTE: A moderately active woman needs 18 calories per pound, a moderately active man needs 20.5 calories per pound, and a man doing strenuous labor may need up to 28 calories per pound of ideal weight.)

INFORMATION SHEET

C. Multiply the ideal weight by calories needed to determine daily calorie requirement

Example: Ideal weight of woman with height of 5'5"

$$\begin{array}{r} 125 \text{ pounds} \\ \times\ 18 \text{ calories} \\ \hline 2{,}250 \text{ calories per day} \end{array}$$

XX. Terms associated with elimination in the digestive system

A. Defecation--Elimination of waste and undigested food from the rectum

B. Flatus--Gas in the digestive tract

C. Incontinence--Inability to retain urine or feces due to loss of sphincter control

D. Commode--Chair with an open seat to accommodate a bedpan or other receptacle for feces and urine

E. Bedpan--Utensil used by a female for defecation and urination and by the male for defecation

F. Fracture pan--Small, flat bedpan used for patients who are in casts or are unable to use a conventional bedpan

G. Anus--External opening of the rectum

H. Suppository--Semi-solid medicated substance for introduction into the rectum, vagina, or urethra

I. Hemorrhoids--Dilated blood vessels in the anal area

J. Polyps--Growths attached to the mucous membranes of the nose, bladder, colon, or uterus

K. Enema--Introduction of fluid into the rectum and colon

L. Diarrhea--Frequent passage of watery bowel movements

M. Colitis--Inflammation of the colon

N. Endoscopy--Inspection of body organs or cavities by a scope

O. Proctoscopy--Examination of the rectum with a special instrument

P. Sigmoidoscopy--Examination of the sigmoid with a special instrument

Q. Fecal impaction--Collection of hardened feces in the rectum and/or sigmoid

R. Cellulose--Indigestible, fibrous material found in plants that helps stimulate peristalsis and aids in intestinal elimination

INFORMATION SHEET

S. Constipation--Difficulty in defecation, usually with hard and dry fecal material

XXI. Mechanism of rectal reflex

A. Rectal control is similar to urethral control with an internal and external sphincter

B. When the sigmoid and rectum become distended with fecal material, afferent impulses are transmitted to the spinal cord which in turn excites the muscle walls of the rectum to contract and the internal sphincter to relax

C. The external sphincter is consciously controlled and in the normal person these rectal reflexes can be inhibited adversely until constipation results

XXII. Factors that inhibit elimination in the hospital setting

A. Lack of privacy

B. Immobility

Examples: Casts; traction; recumbent position for prolonged periods of time

C. Diet changes

D. Medications such as narcotics or barbiturates

E. Fluid intake

F. Uncomfortable with use of bedpan

G. Weakness because of illness or surgery

H. Psychological or emotional stress

XXIII. Nursing measures that will aid elimination (Job Sheets #1, #2, #3, #7, #8, #9, and #10)

A. Provide privacy for the patient during elimination

B. Encourage patient to follow a diet that contains cellulose

(NOTE: The roughage provided through cellulose helps in the absorption of water to provide bulk and to stimulate peristalsis.)

C. Provide opportunity for elimination at regular intervals to prevent bladder distention and constipation

D. Establish a routine in an effort to control incontinence

INFORMATION SHEET

E. Keep a daily record of elimination

F. Provide for adequate hydration

G. Assess elimination function

Examples: Observe abnormalities in urine of feces; collect urine or feces for laboratory examination; assist in determining adequacy of elimination

XXIV. Sources of cellulose

(NOTE: Daily requirement of cellulose in the diet should be five or seven grams.)

A. Vegetables

(NOTE: Each serving of vegetables, except potatoes, provides approximately one gram of cellulose.)

Examples: Green, leafy vegetables; stalks of vegetables like asparagus

B. Fruits

Examples: Seeds of fruits, some skins of fruits

C. Whole grain products

Example: Bran

(NOTE: Refined cereals and sugars have nearly all the fiber removed and are not completely digestible.)

XXV. Characteristics of defecation to observe (Job Sheet #4)

A. Number of movements per day

B. Consistency, shape, color, and odor

C. Presence of any unusual matter such as blood or mucus

D. Expulsion of flatus

E. Symptoms of pain, abdominal distention, or cramping

XXVI. Types of enemas (Job Sheets #5 and #6)

A. Non-retention or cleansing

(NOTE: These enemas are used to aid in removal of feces from the colon and rectum.)

1. Soapsuds

INFORMATION SHEET

2. Physiologic saline

3. Carminitive

   (NOTE: These contain an agent that will aid in expelling flatus.)

4. Hypertonic solutions of salts

B. Retention

(NOTE: These enemas are used for injecting prescribed lubricants for softening or medications into the colon and/or rectum.)

1. Lubricating

2. Anthelmintic

   (NOTE: These contain medication to help destroy intestinal parasites.)

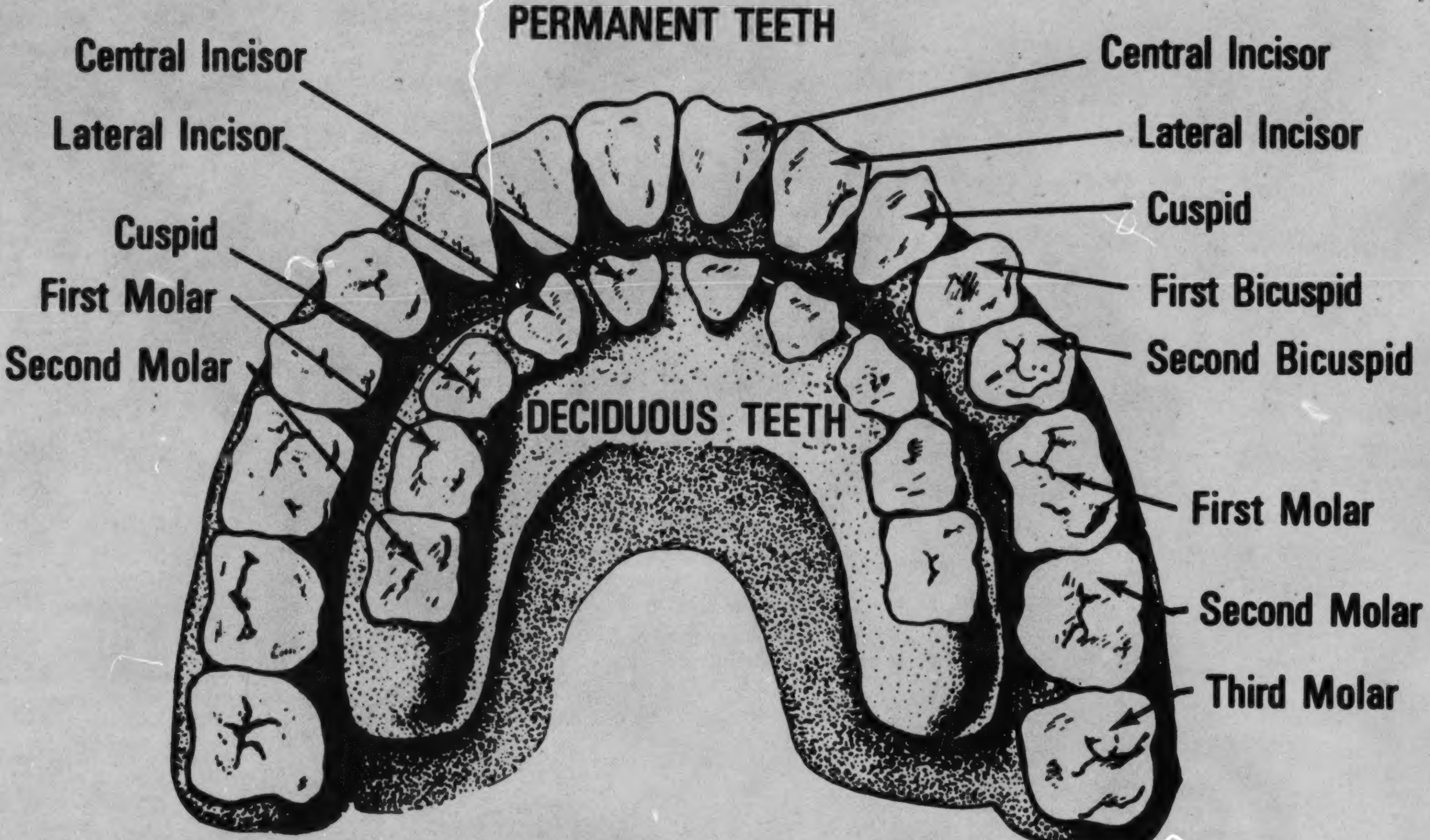
3. Emollient

   (NOTE: Small amounts of oil or other soothing solutions are given to protect or soothe irritated mucous membranes.)

4. Medicated

   (NOTE: Small amount of solution containing sedative, anesthesia, or other medications is given as prescribed.)

Deciduous Teeth and Permanent Teeth


PERMANENT TEETH
Central Incisor
Lateral Incisor
Cuspid
First Molar
Second Molar
Central Incisor
Lateral Incisor
Cuspid
First Bicuspid
Second Bicuspid
First Molar
Second Molar
Third Molar
DECIDUOUS TEETH

TM 1

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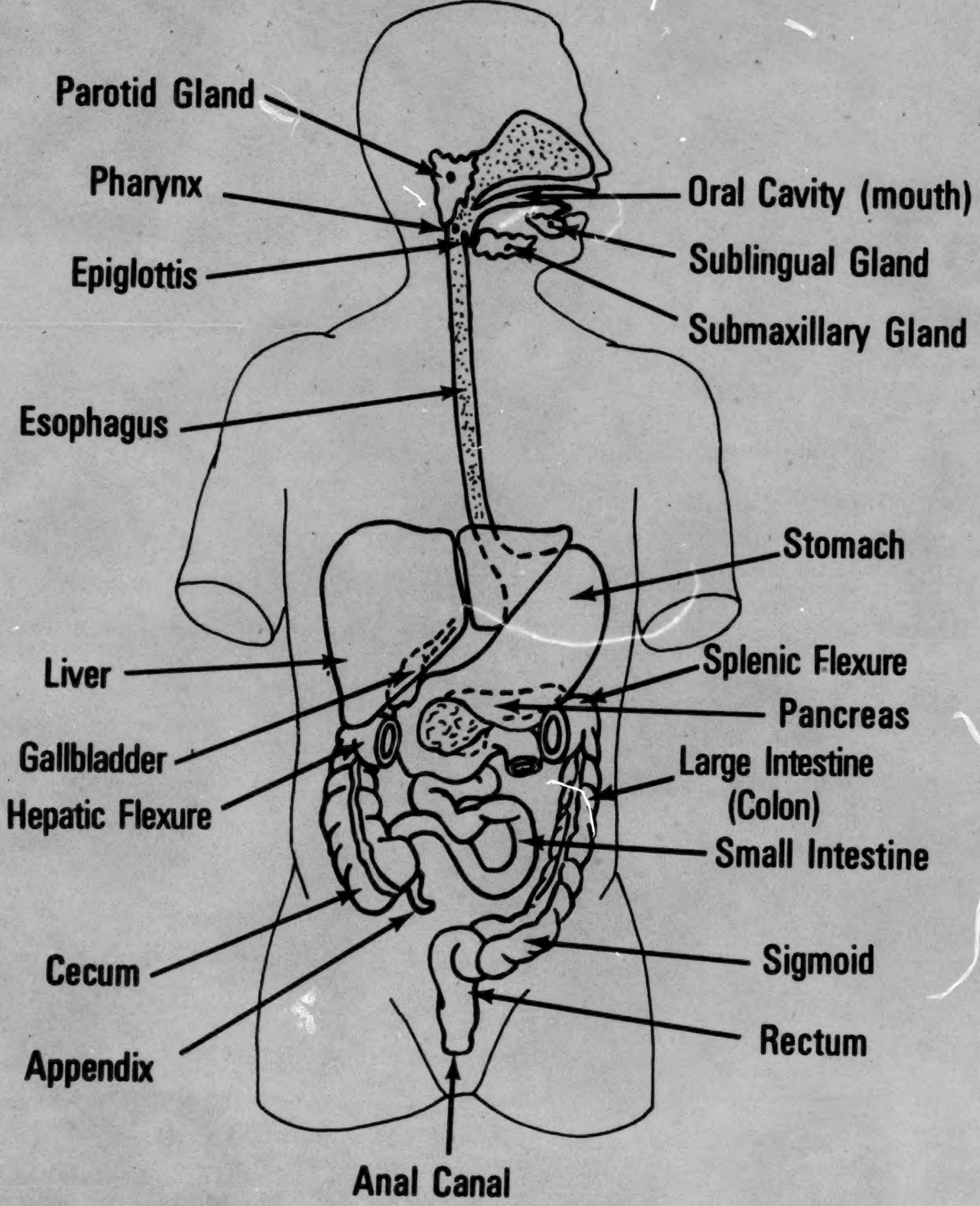
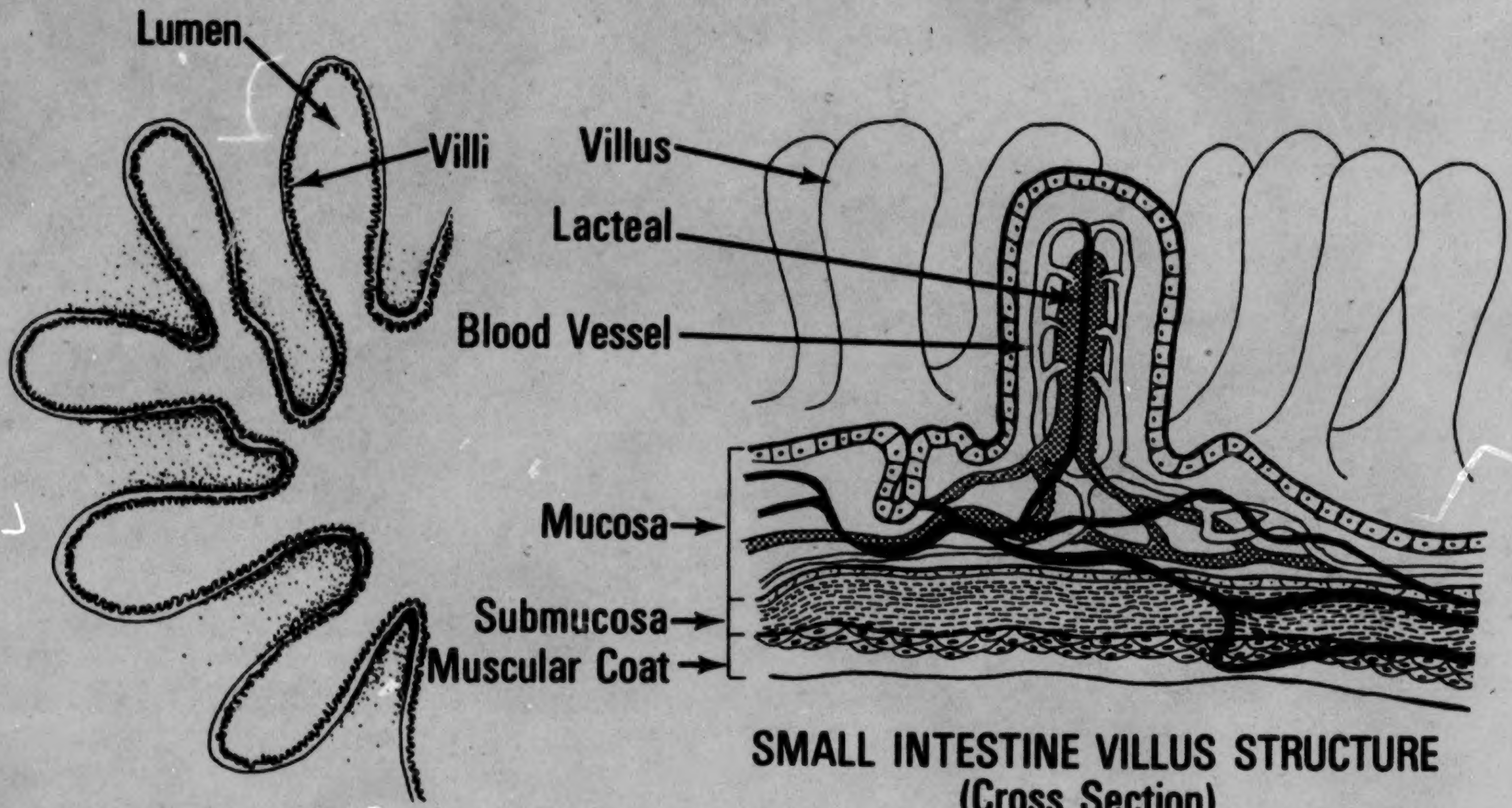
The Digestive Organs


Parotid Gland
Pharynx
Epiglottis
Esophagus
Oral Cavity (mouth)
Sublingual Gland
Submaxillary Gland
Stomach
Liver
Splenic Flexure
Pancreas
Gallbladder
Large Intestine (Colon)
Hepatic Flexure
Small Intestine
Sigmoid
Cecum
Rectum
Appendix
Anal Canal

Structure of the Villi


Lumen
Villi
Villus
Lacteal
Blood Vessel
Mucosa
Submucosa
Muscular Coat

SMALL INTESTINE VILLUS STRUCTURE
(Cross Section)

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

ASSIGNMENT SHEET #1--CALCULATE CALORIES

NAME ______________________________ SCORE ____________

Today's society has become very calorie conscious. Magazines and television advertise products produced for the calorie-watching population, and health articles attack obesity and junk foods full of empty calories. "You are what you eat" is a statement that may hit close to home. What do you eat? Are you getting the nutrients you need or calories you don't need? Start today and write down exactly what you have eaten and follow through for a week. Don't forget that candy bar and cola you had for a snack. Using a nutrition or other text, calculate each day's calories. Then refer back to objective 19 in your unit and calculate how many calories you should be taking in. Are you over or under?

ASSIGNMENT SHEET #1

FOODS EATEN	NUMBER OF CALORIES	FOODS EATEN	NUMBER OF CALORIES
First Day		Second Day	
BREAKFAST		BREAKFAST	
SNACK		SNACK	
LUNCH		LUNCH	
SNACK		SNACK	
DINNER		DINNER	
SNACK		SNACK	

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ASSIGNMENT SHEET #1

FOODS EATEN	NUMBER OF CALORIES	FOODS EATEN	NUMBER OF CALORIES
Third Day		Fourth Day	
BREAKFAST		BREAKFAST	
SNACK		SNACK	
LUNCH		LUNCH	
SNACK		SNACK	
DINNER		DINNER	
SNACK		SNACK	

ASSIGNMENT SHEET #1

FOODS EATEN	NUMBER OF CALORIES	FOODS EATEN	NUMBER OF CALORIES
Fifth Day		Sixth Day	
BREAKFAST		BREAKFAST	
SNACK		SNACK	
LUNCH		LUNCH	
SNACK		SNACK	
DINNER		DINNER	
SNACK		SNACK	

ASSIGNMENT SHEET #1

FOODS EATEN	NUMBER OF CALORIES
Seventh Day	
BREAKFAST	
SNACK	
LUNCH	
SNACK	
DINNER	
SNACK	

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

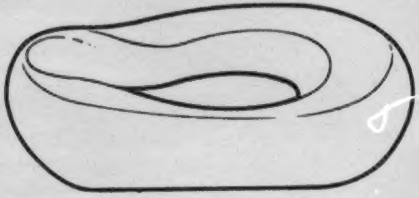
JOB SHEET #1--GIVE AND REMOVE A BEDPAN AND/OR FRACTURE PAN

I. Equipment needed

A. Bedpan and/or fracture pan

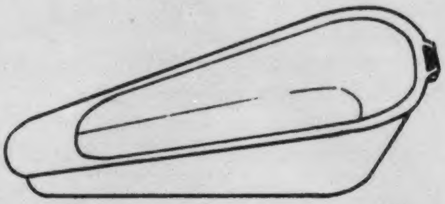
(NOTE: Patients who are in casts or are unable to use a conventional bedpan may use a fracture pan. See Figures 1 and 2.)

FIGURE 1



Bedpan

FIGURE 2



Fracture Pan

B. Bedpan cover

C. Toilet tissue

D. Wash basin

E. Soap

F. Towel

II. Procedure

A. Wash hands

B. Warm bedpan or fracture pan; cover and take to patient's bedside

C. Provide privacy

D. Turn back upper bedding part-way without exposing patient

JOB SHEET #1

E. Place patient on bedpan or fracture pan

1. If patient can help
    - a. Instruct patient to raise hips by flexing knees and resting weight on heels
    - b. Support lower back with one hand and slip bedpan or fracture pan in place with the other
2. If patient is unable to help
    - a. Level bed and turn patient onto side, flexing leg
    - b. Slip bedpan or fracture pan as far as possible under patient's hips

      (NOTE: Make sure the fracture pan is turned so that the handle is at the foot of the bed and the more narrow end is under the patient's hips.)
    - c. Turn patient onto bedpan or fracture pan while holding pan

F. Raise backrest, if permitted

G. Place toilet tissue within reach of patient

H. Place communication device within reach and instruct patient to call for assistance or service when needed

I. Leave patient alone if permitted, but return frequently to check

J. Answer the patient's signal promptly

K. Remove bedpan or fracture pan

1. If the patient can help
    - a. Assist patient to raise hips by slipping hand under small of back and helping patient to raise buttocks
    - b. Remove bedpan or fracture pan and cover
2. If the patient is unable to assist
    - a. Level bed; holding bedpan or fracture pan, turn patient to side
    - b. Remove bedpan or fracture pan and cover

L. Cleanse patient as necessary

1. Clean area with toilet tissue with patient on side; place soiled tissue in bedpan or fracture pan; cover

JOB SHEET #1

   2. Wash with soapy water, if necessary, and rinse
   3. Dry well

M. Make patient comfortable

   1. Straighten bedding
   2. Readjust bed to desired position

N. Remove bedpan or fracture pan from unit

   1. Look at contents of bedpan or fracture pan before emptying
   2. Empty contents into toilet
   3. Rinse with cold water; cleanse thoroughly according to institution's procedure

O. Wash hands

P. Provide soap and basin of water for patient to wash hands, if needed

Q. Report and record the color, amount, odor, and consistency of feces or urine

JOB SHEET #1

III. Checklist for giving and removing a bedpan and/or fracture pan

	Performed well	Needs improvement
A. Gathered needed equipment	☐	☐
Comments: ____________________		
____________________		
____________________		
B. Washed hands correctly	☐	☐
Comments: ____________________		
____________________		
____________________		
C. Warmed bedpan or fracture pan, covered correctly and took to patient's bedside	☐	☐
Comments: ____________________		
____________________		
____________________		
D. Provided privacy	☐	☐
Comments: ____________________		
____________________		
____________________		
E. Turned back under bedding part way without exposing patient	☐	☐
Comments: ____________________		
____________________		
____________________		

JOB SHEET #1

	Performed well	Needs improvement
F. To help patient on bedpan or fracture pan, instructed patient to raise hips by flexing knees and resting weight on heels; supported lower back with one hand and slipped bedpan or fracture pan in place with other pan	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
G. If patient was unable to help, leveled bed and turned patient onto side, flexing leg; slipped bedpan or fracture pan as far as possible under patient's hips	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
H. Raised backrest, if permitted; placed toilet tissue within reach of patient	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
I. Placed communication device within reach and instructed patient to call for assistance or service when needed	☐	☐

Comments: ____________________

____

____

JOB SHEET #1

		Performed well	Needs improvement
J.	Left patient alone if permitted; returned frequently to check on patient	☐	☐

Comments: ______________________________

____

____

K.	If patient could help, assisted to raise hips by slipping hand under small of back and by helping patient to raise buttocks; removed bedpan or fracture pan and cover	☐	☐

Comments: ______________________________

____

____

L.	If patient was unable to assist, leveled bed; holding bedpan or fracture pan, turned patient to side; removed bedpan or fracture pan and cover	☐	☐

Comments: ______________________________

____

____

M.	To cleanse patient, cleaned area with toilet tissue with patient on side; placed soiled tissue in bedpan or fracture pan; covered	☐	☐

Comments: ______________________________

____

____

JOB SHEET #1

		Performed well	Needs improvement
N.	Washed with soapy water, if necessary, rinsed; dried well	☐	☐
	Comments:		
O.	To make patient comfortable, straightened bedding; readjusted bed to desired position	☐	☐
	Comments:		
P.	To remove bedpan or fracture pan from unit, looked at contents before emptying; emptied contents into toilet; rinsed with cold water; cleansed thoroughly according to institution's procedure	☐	☐
	Comments:		
Q.	Washed hands correctly	☐	☐
	Comments:		
R.	Provided soap and water for patient to wash hands, if necessary	☐	☐
	Comments:		

JOB SHEET #1

		Performed well	Needs improvement
S.	Reported and recorded amount, color, odor, and consistency of feces and urine	☐	☐

Comments: ______________________________

____

____

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

JOB SHEET #2--ASSIST THE PATIENT TO THE BATHROOM

I. Equipment--Patient's robe and shoes

II. Procedure

   A. Adjust bed to lowest position or bring footstool for patient

   B. Help patient sit on edge of bed

   C. Put slippers and robe on patient

   D. Help patient to stand, giving necessary support while walking to the bathroom

   E. Help patient to sit on toilet

   F. Remain nearby to offer assistance as needed

   G. Have patient wash hands when finished

   H. Help patient return to bed

   I. Provide for patient's comfort

   J. Wash hands

   K. Record elimination

JOB SHEET #2

III. Checklist for assisting the patient to the bathroom

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ____________________ ____________________ ____________________		
B.	Adjusted bed to lowest position or provided footstool	☐	☐
	Comments: ____________________ ____________________ ____________________		
C.	Assisted patient to sit on edge of bed	☐	☐
	Comments: ____________________ ____________________ ____________________		
D.	Assisted patient in putting on slippers and robe	☐	☐
	Comments: ____________________ ____________________ ____________________		
E.	Helped patient stand and gave needed support while walking to bathroom	☐	☐
	Comments: ____________________ ____________________ ____________________		

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JOB SHEET #2

		Performed well	Needs improvement
F.	Assisted patient to sit on toilet	☐	☐
	Comments: ______________________________		
G.	Remained nearby to offer assistance	☐	☐
	Comments: ______________________________		
H.	Had patient wash hands after procedure	☐	☐
	Comments: ______________________________		
I.	Helped patient to return to bed and made patient comfortable	☐	☐
	Comments: ______________________________		
J.	Used good body mechanics throughout procedure	☐	☐
	Comments: ______________________________		
K.	Washed hands correctly	☐	☐
	Comments: ______________________________		

JOB SHEET #2

		Performed well	Needs improvement
L.	Noted elimination correctly in chart	☐	☐

Comments: ____

____

____

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

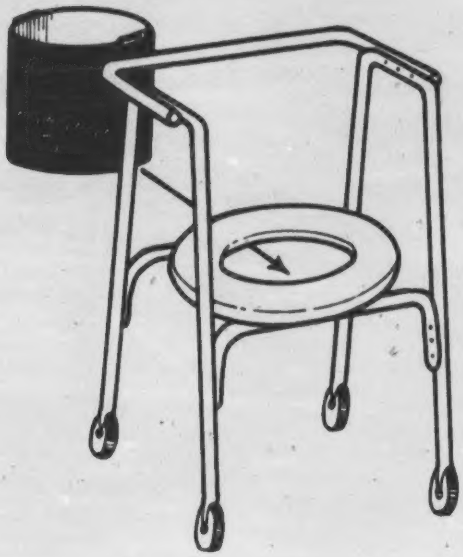
JOB SHEET #3--ASSIST THE PATIENT IN USING THE COMMODE

I. Equipment needed

   A. Commode chair (Figure 1)

   (NOTE: There are different types of commodes available. All have removable containers.)

FIGURE 1



   B. Toilet tissue

   C. Bathrobe

   D. Slippers

II. Procedure

   A. Take commode to bedside and place conveniently

   B. Lock wheels of commode chair, if using that type

   C. Prepare patient

      1. Assist patient to sitting position in bed

      2. Dress patient in bathrobe and slippers

JOB SHEET #3

D. Assist patient out of bed and onto commode
E. Place communication device within reach and leave patient
F. Check patient as needed
G. Assist in cleansing patient as necessary
H. Assist patient's return to bed
I. Wash patient's hands
J. Examine and measure the contents in removable container
K. Clean commode and replace the removable container
L. Wash hands
M. Record elimination

JOB SHEET #3

III. Checklist for assisting patient in using the commode

		Performed well	Needs improvement
A.	Gathered needed equipment	☐	☐
	Comments: ____________________ ____________________ ____________________		
B.	Placed commode by bedside and locked wheels if necessary	☐	☐
	Comments: ____________________ ____________________ ____________________		
C.	Assisted the patient to sit on side of bed	☐	☐
	Comments: ____________________ ____________________ ____________________		
D.	Dressed patient in robe and slippers	☐	☐
	Comments: ____________________ ____________________ ____________________		
E.	Assisted patient out of bed and onto commode	☐	☐
	Comments: ____________________ ____________________ ____________________		

888-C

JOB SHEET #3

		Performed well	Needs improvement
F.	Placed communication device close by and checked frequently on patient	☐	☐
	Comments:		
G.	Cleansed patient as needed	☐	☐
	Comments:		
H.	Assisted patient to return to bed and made patient comfortable	☐	☐
	Comments:		
I.	Assisted patient in washing hands	☐	☐
	Comments:		
J.	Noted appearance of, and measured contents of commode container before emptying	☐	☐
	Comments:		
K.	Cleaned commode correctly and returned to proper area	☐	☐
	Comments:		

JOB SHEET #3

	Performed well	Needs improvement
L. Washed hands correctly	☐	☐

Comments: ____

____

____

	Performed well	Needs improvement
M. Noted elimination correctly in chart	☐	☐

Comments: ____

____

____

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

JOB SHEET #4--COLLECT A STOOL SPECIMEN

I. Equipment needed

A. Bedpan or commode

B. Two tongue depressors

C. Plastic or cardboard container with cover

D. Paper towel

E. Label

F. Laboratory requisition

II. Procedure

A. Check the physician's orders for specific instructions and reason for collecting specimen

B. Fill out the label for the container and the laboratory requisition

C. Wash hands

D. Inform the patient of the procedure and ask him or her to use the bedpan or commode so the specimen may be obtained

(NOTE: If the patient is ambulatory, she or he may be allowed to use the bedpan on a nearby chair; in some instances, the bedpan or disposable container may be placed in the toilet just under the toilet seat.)

E. Take the bedpan to the utility room after obtaining the specimen

F. Use tongue depressors to place about two tablespoons of the fecal material in the container; cover container

G. Wrap the soiled tongue depressors in a paper towel and discard

H. Care for the bedpan in the usual manner

I. Wash hands

J. Label and take the specimen to the laboratory promptly

(NOTE: Specimens are examined for pus, blood, tissue, parasites, and helminths, or to determine digestive function; it is best to get the specimen to the laboratory as soon as possible while still warm. Check with the laboratory if any specific instructions are needed on the method of collection.)

K. Report and record procedure and observations

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JOB SHEET #4

III. Checklist for collecting a stool specimen

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ____________________ ____________________ ____________________		
B.	Checked physician's orders	☐	☐
	Comments: ____________________ ____________________ ____________________		
C.	Filled out label for container and laboratory requisition	☐	☐
	Comments: ____________________ ____________________ ____________________		
D.	Washed hands	☐	☐
	Comments: ____________________ ____________________ ____________________		
E.	Informed patient of procedure and asked him or her to use bedpan or commode so specimen could be obtained	☐	☐
	Comments: ____________________ ____________________ ____________________		

JOB SHEET #4

	Performed well	Needs improvement
F. Took bedpan to utility room after obtaining specimen	☐	☐
Comments: ______________________		
G. Used tongue depressors to place about two tablespoons of fecal material in container; covered container	☐	☐
Comments: ______________________		
H. Wrapped soiled tongue depressors in a paper towel and discarded	☐	☐
Comments: ______________________		
I. Cared for bedpan in usual manner	☐	☐
Comments: ______________________		
J. Washed hands	☐	☐
Comments: ______________________		

JOB SHEET #4

	Performed well	Needs improvement
K. Labeled and took specimen to laboratory promptly	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
L. Reported and recorded procedure and observations	☐	☐

Comments: ______________________________

____

____

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

JOB SHEET #5--GIVE A CLEANSING ENEMA

I. Equipment needed

A. Disposable enema bag with tubing and clamp

(NOTE: Irrigating metal cans are used in some institutions.)

B. Emesis basin

C. Lubricant

(NOTE: Disposable unit contains lubricant.)

D. Toilet tissue

E. Bath thermometer

F. Pitcher or graduate

G. Solution as prescribed

(NOTE: Disposable unit contains packet of mild liquid soap.)

H. Bath blanket

I. Bed protector

J. Bedpan with cover

II. Procedure

A. Wash hands

B. Assemble equipment

C. Prepare solution as prescribed

(NOTE: Solution may be mixed in bag after water is measured and temperature is determined in graduate. Saline is a commonly used solution and can be a pre-mixed preparation or use four tablespoons salt to 1,000 cc water.)

(**CAUTION**: When preparing solution, such as soap suds or physiologic saline solution, temperature of the solution should be 105°F [37.2°C]. Solution given at 110°F [43.3°C] or higher may burn the mucous lining of the intestines.)

D. Identify patient and explain procedure

E. Provide privacy

JOB SHEET #5

F. Replace top covers with bath blanket or cover

G. Assist patient to turn to Sim's position

H. Place bed protector under patient's buttocks

I. Allow a small amount of solution to flow into the emesis basin or bedpan to expel the air and cooled solution from the tubing; clamp or pinch tubing

J. Lubricate two-three inches (5.18-7.62 cm) of the tip of the rectal tube, using lubricant on a piece of toilet tissue

K. Raise upper buttocks so anus is clearly seen and gently insert tip of tube three-four inches (7.62-10.16 cm) into anus and hold in place

L. Release clamp on tubing, allowing solution to run slowly

(NOTE: Instruct the patient to breathe deeply through the mouth and to tell of any cramping or discomfort that occurs.)

M. Regulate the flow of solution by pinching off the tube momentarily at intervals during the administration and lower the bag but not below the level of the patient

N. Clamp off tubing when most of the solution has been given or when the patient indicates he or she is unable to take any more

(NOTE: Clamping off the tubing prevents air from reaching the patient.)

O. Withdraw rectal tube slowly; cover with a piece of tissue and place it in emesis basin

P. Assist patient onto the bedpan

Q. Elevate head of bed, if permitted

R. Place toilet tissue and communication device within patient's reach

S. Remove equipment; dispose of properly

T. Check patient frequently

U. Remove bedpan when the enema and feces have been completely expelled

V. Assist patient as necessary with cleansing

W. Empty bedpan, observing the results of the enema--the color, amount, and consistency of the feces

X. Wash hands

JOB SHEET #5

Y. Assist patient in handwashing

Z. Provide for patient's comfort

AA. Wash hands

BB. Report and record procedure and observations

JOB SHEET #5

III. Checklist for giving a cleansing enema

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ________________________________		
B. Washed hands; assembled equipment	☐	☐
Comments: ________________________________		
C. Prepared solution as prescribed	☐	☐
Comments: ________________________________		
D. Identified patient and explained procedure	☐	☐
Comments: ________________________________		
E. Provided privacy	☐	☐
Comments: ________________________________		

JOB SHEET #5

		Performed well	Needs improvement
F.	Replaced top covers with bath blanket or cover	☐	☐
	Comments: ____________________		
G.	Assisted patient to turn to Sim's position	☐	☐
	Comments: ____________________		
H.	Placed bed protector under patient's buttocks	☐	☐
	Comments: ____________________		
I.	Allowed a small amount of solution to flow into emesis basin or bedpan to expel the air and cooled solution from tubing; clamped or pinched tubing	☐	☐
	Comments: ____________________		
J.	Lubricated two-three inches (5.18 - 7.62 cm) of tip of rectal tube, using lubricant on piece of toilet tissue	☐	☐
	Comments: ____________________		

JOB SHEET #5

		Performed well	Needs improvement
K.	Raised upper buttocks so anus was clearly seen and gently inserted tip of tube three-four inches (7.62 - 10.16 cm) into anus and held in place	☐	☐

Comments: ____

____

____

		Performed well	Needs improvement
L.	Released clamp on tubing, allowing solution to run slowly	☐	☐

Comments: ____

____

____

		Performed well	Needs improvement
M.	Regulated flow of solution by pinching off tube momentarily at intervals during administration and lowered the bag but not below level of patient	☐	☐

Comments: ____

____

____

		Performed well	Needs improvement
N.	Clamped off tubing when most of solution had been given or when patient indicated he or she was unable to take any more	☐	☐

Comments: ____

____

____

JOB SHEET #5

		Performed well	Needs improvement
O.	Withdrew rectal tube slowly; covered with a piece of tissue and placed it in emesis basin	☐	☐

Comments: ______________________

____

____

		Performed well	Needs improvement
P.	Assisted patient onto bedpan	☐	☐

Comments: ______________________

____

____

		Performed well	Needs improvement
Q.	Elevated head of bed, if permitted	☐	☐

Comments: ______________________

____

____

		Performed well	Needs improvement
R.	Placed toilet tissue and communication device within patient's reach	☐	☐

Comments: ______________________

____

____

		Performed well	Needs improvement
S.	Removed equipment; disposed of properly	☐	☐

Comments: ______________________

____

____

JOB SHEET #5

Performed well | Needs improvement

T. Checked patient frequently ☐ ☐

Comments: ____________________

U. Removed bedpan when enema and feces had been completely expelled ☐ ☐

Comments: ____________________

V. Assisted patient as necessary with cleansing ☐ ☐

Comments: ____________________

W. Emptied bedpan, observed results of enema--color, amount, and consistency of feces ☐ ☐

Comments: ____________________

X. Washed hands ☐ ☐

Comments: ____________________

Y. Assisted patient in handwashing ☐ ☐

Comments: ____________________

JOB SHEET #5

		Performed well	Needs improvement
Z.	Provided for patient's comfort	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
AA.	Washed hands	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
BB.	Reported and recorded procedure and observations	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

JOB SHEET #6--GIVE A RETENTION ENEMA

I. Equipment needed

A. Solution as prescribed in a small pitcher or graduate

B. Rectal tube or small catheter

C. Funnel or Asepto syringe

D. Bath blanket

E. Lubricant

F. Bed protector

G. Emesis basin

H. Toilet tissue

II. Procedure

A. Wash hands

B. Assemble equipment

C. Prepare solution

(NOTE: Temperature of solution should be 100°F [37.6°C] and usually less than 200 cc is given.)

D. Identify patient and explain procedure

E. Provide privacy

F. Replace top covers with bath blanket

G. Assist patient to turn to Sims' position

H. Place protective pad under buttocks

I. Lubricate two-three inches (5.18-7.62 cm) of the tip of the rectal tube or catheter

J. Insert top of tube two-three inches (5.18-7.62 cm) into the rectum

K. Hold the funnel or Asepto syringe 8 inches (20.32 cm) or less above the anus

(NOTE: Holding the funnel lower causes less pressure and aids the patient's ability to retain the solution.)

JOB SHEET #6

L. Keep adding solution until all has been taken

M. Clamp off tubing just before last of solution has been taken

N. Remove the rectal tube slowly, cover with tissue, and place in emesis basin

O. Leave bed protector under patient's buttocks

P. Replace top covers; provide for patient's comfort

Q. Remove, clean, and replace equipment

R. Wash hands

S. Report and record treatment and observations

JOB SHEET #6

III. Checklist for giving a retention enema

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________________		
B. Washed hands; assembled equipment	☐	☐
Comments: ______________________		
C. Prepared solution	☐	☐
Comments: ______________________		
D. Identified patient and explained procedure	☐	☐
Comments: ______________________		
E. Provided privacy	☐	☐
Comments: ______________________		
F. Replaced top covers with bath blanket	☐	☐
Comments: ______________________		

JOB SHEET #6

		Performed well	Needs improvement
G.	Assisted patient to turn to Sim's position	☐	☐
	Comments: ______________________ ______________________ ______________________		
H.	Placed protective pad under buttocks	☐	☐
	Comments: ______________________ ______________________ ______________________		
I.	Lubricated two-three inches (5.18- 7.62 cm) of tip of rectal tube or catheter	☐	☐
	Comments: ______________________ ______________________ ______________________		
J.	Inserted top of tube two-three inches (5.18 - 7.62 cm) into rectum	☐	☐
	Comments: ______________________ ______________________ ______________________		
K.	Held funnel or Asepto syringe 8 inches (20.32 cm) or less above the anus	☐	☐
	Comments: ______________________ ______________________ ______________________		

JOB SHEET #6

		Performed well	Needs improvement
L.	Kept adding solution until all had been taken	☐	☐
	Comments:		
M.	Clamped off tubing just before last of solution had been taken	☐	☐
	Comments:		
N.	Removed rectal tube slowly, covered with tissue, and placed in emesis basin	☐	☐
	Comments:		
O.	Left bed protector under patient's buttocks	☐	☐
	Comments:		
P.	Replaced top covers; provided for patient's comfort	☐	☐
	Comments:		

JOB SHEET #6

		Performed well	Needs improvement
Q.	Removed, cleaned, and replaced equipment	☐	☐
	Comments: ____________________ ____________________ ____________________		
R.	Washed hands	☐	☐
	Comments: ____________________ ____________________ ____________________		
S.	Reported and recorded treatment and observations	☐	☐
	Comments: ____________________ ____________________ ____________________		

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

JOB SHEET #7--GIVE A HARRIS FLUSH/COLONIC IRRIGATION

I. Equipment

- A. Disposable enema bag with tubing and clamp
- B. Emesis basin
- C. Lubricant
- D. Toilet tissue
- E. Bath thermometer
- F. Pitcher or graduate container
- G. Solution
- H. Bath blanket
- I. Bed protector
- J. Bedpan with cover

II. Procedure

- A. Wash hands
- B. Assemble equipment
- C. Prepare solution as prescribed

  Examples: Tap water, saline solution
- D. Identify patient and explain procedure
- E. Provide privacy
- F. Replace top covers with bath blanket
- G. Assist patient to turn to Sim's position
- H. Place bed protector under patient's buttocks
- I. Allow a small amount of solution to flow into the emesis basin or bedpan to expel the air and cooled solution from the tubing; clamp or pinch tubing
- J. Lubricate two-three inches (5.18-7.62 cm) of the tip of the tubing
- K. Raise upper buttocks so anus is clearly seen and gently insert tip of tube three-four inches (7.62-10.16 cm) into anus and hold in place

JOB SHEET #7

L. Instill 200-300 ml (milliliters) of the solution into the patient's bowel

M. Hold the bag 12-18 inches (30-45 cm) above the anus and regulate the flow according to the patient's ability to retain the fluid

N. Lower the bag 12-18 inches (30-45 cm) below the anus and allow the solution to flow back into the bag

(NOTE: If fecal material flows back into the bag or if the solution becomes thick, it may be emptied into the bedpan and more clear solution is used to fill the bag.)

O. Repeat steps M and N until patient no longer has flatus

(NOTE: Flushing can be done at least four-five times to ensure release of flatus.)

P. Clamp off tubing and gently remove from anus

Q. Provide for the patient's comfort by cleansing and drying area thoroughly

R. Observe results of the flush and the patient's reaction

S. Remove equipment from room and clean and store properly

T. Wash hands

U. Record procedure and patient's reaction

JOB SHEET #7

III. Checklist for giving a Harris flush/colonic irrigation

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
B. Washed hands; assembled equipment	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
C. Prepared solutions prescribed	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
D. Identified patient and explained procedure	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
E. Provided privacy	☐	☐

Comments: ____________________

____

____

916-C

JOB SHEET #7

		Performed well	Needs improvement
F.	Replaced top covers with bath blanket	☐	☐
	Comments: ____________________		
G.	Assisted patient to turn to Sim's position	☐	☐
	Comments: ____________________		
H.	Placed bed protector under patient's buttocks	☐	☐
	Comments: ____________________		
I.	Allowed a small amount of solution to flow into the emesis basin or bedpan to expel the air and cooled solution from tubing; clamped or pinched tubing	☐	☐
	Comments: ____________________		
J.	Lubricated two-three inches (5.18 - 7.62 cm) of tip of tubing	☐	☐
	Comments: ____________________		

JOB SHEET #7

		Performed well	Needs improvement
K.	Raised upper buttocks so anus was clearly seen and gently inserted tip of tube three-four inches (7.62-10.16 cm) into anus and held in place	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
L.	Instilled 200-300 ml (milliliters) of solution into patient's bowel	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
M.	Held bag 12-18 inches (30-45 cm) above the anus and regulated the flow according to the patient's ability to retain the fluid	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
N.	Lowered the bag 12-18 inches (30-45cm) below the anus and allowed solution to flow back into bag	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		

JOB SHEET #7

		Performed well	Needs improvement
O.	Repeated steps M and N until patient no longer had flatus	☐	☐
	Comments: ______________________________		
P.	Clamped off tubing and gently removed from anus	☐	☐
	Comments: ______________________________		
Q.	Provided for patient's comfort by cleansing and drying area thoroughly	☐	☐
	Comments: ______________________________		
R.	Observed results of flush and patient's reaction	☐	☐
	Comments: ______________________________		
S.	Removed equipment from room and cleaned and stored properly	☐	☐
	Comments: ______________________________		

JOB SHEET #7

		Performed well	Needs improvement
T.	Washed hands	☐	☐
	Comments: ____________________		
	____________________		
	____________________		
U.	Recorded procedure and patient's reaction	☐	☐
	Comments: ____________________		
	____________________		
	____________________		

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

JOB SHEET #8--INSERT A COLON TUBE

I. Equipment

   A. Small colon tube

      (NOTE: In some institutions this tube is called rectal tube.)

   B. Lubricant

   C. Toilet tissue

   D. Bed protector

   E. Adhesive tape

   F. Container or paper towels

II. Procedure

   A. Wash hands

   B. Assemble equipment

   C. Identify patient and explain procedure

   D. Provide privacy

   E. Turn patient to Sim's position; remove top covers sufficiently to expose buttocks

   F. Lubricate tip of colon tube

   G. Gently insert tube approximately three-four inches (7.62-10.16 cm)

   H. Tape in place with adhesive tape if necessary

   I. Place end of tube in container or in folded paper towels in case there is expulsion of fecal material

   J. Leave in place prescribed length of time, usually 20-30 minutes

   K. Remove colon tube; provide for patient's comfort

   L. Clean and return equipment to storage

   M. Wash hands

   N. Report and record treatment and observations

JOB SHEET #8

III. Checklist for inserting a colon tube

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ______________________________		
B.	Washed hands; assembled equipment	☐	☐
	Comments: ______________________________		
C.	Identified patient and explained procedure	☐	☐
	Comments: ______________________________		
D.	Provided privacy	☐	☐
	Comments: ______________________________		
E.	Turned patient to Sim's position; removed top covers sufficiently to expose buttocks	☐	☐
	Comments: ______________________________		

JOB SHEET #8

		Performed well	Needs improvement
F.	Lubricated tip of colon tube	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
G.	Gently inserted tube approximately three-four inches (7.62 - 10.16 cm)	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
H.	Taped in place with adhesive tape if necessary	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
I.	Placed end of tube in container or in folded paper towels in case there was expulsion of fecal material	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
J.	Left in place prescribed length of time, usually 20-30 minutes	☐	☐

Comments: ____________________

____

____

JOB SHEET #8

	Performed well	Needs improvement
K. Removed colon tube; provided for patient's comfort	☐	☐
Comments: ______________________________		
L. Cleaned and returned equipment to storage	☐	☐
Comments: ______________________________		
M. Washed hands	☐	☐
Comments: ______________________________		
N. Reported and recorded treatment and observations	☐	☐
Comments: ______________________________		

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

JOB SHEET #9--INSERT A RECTAL SUPPOSITORY

I. Equipment

   A. Suppository, as prescribed

   B. Lubricant, as needed

   C. Container for suppository

   D. Exam glove

II. Procedure

   A. Wash hands

   B. Assemble equipment

   C. Identify patient and explain procedure

   D. Provide privacy

   E. Turn patient to Sim's position and expose buttocks

   F. Put on exam glove

   G. Insert lubricated suppository, using gloved finger, approximately two and one-half--three inches (6.35-7.62 cm) along the wall of the rectum

   (NOTE: If the purpose of the suppository is to induce a bowel movement, the suppository should be retained for 20 minutes or longer; if it is for medication purposes, it is to be retained indefinitely. A medicated suppository should be charted as other medications are noted.)

   H. Provide for the patient's comfort

   I. Wash hands

   J. Report and record procedure and observations

JOB SHEET #9

III. Checklist for inserting a rectal suppository

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ________________		
B.	Washed hands; assembled equipment	☐	☐
	Comments: ________________		
C.	Identified patient and explained procedure	☐	☐
	Comments: ________________		
D.	Provided privacy	☐	☐
	Comments: ________________		
E.	Turned patient to Sim's position and exposed buttocks	☐	☐
	Comments: ________________		
F.	Put on glove	☐	☐
	Comments: ________________		

JOB SHEET #9

	Performed well	Needs improvement
G. Inserted lubricated suppository, using gloved finger, approximately two and one-half--three inches (6.35-7.62 cm) along the wall of rectum	☐	☐
Comments: ____________________		
H. Provided for patient's comfort	☐	☐
Comments: ____________________		
I. Washed hands	☐	☐
Comments: ____________________		
J. Reported and recorded procedure and observations	☐	☐
Comments: ____________________		

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

JOB SHEET #10--REMOVE A FECAL IMPACTION

I. Equipment needed

A. Exam gloves

B. Lubricant

C. Toilet tissue

D. Bedpan with cover

E. Paper towels

F. Bed protector

G. Bath blanket or cover

II. Procedure

(NOTE: Removing a fecal impaction must be done very carefully and gently to prevent damage to rectal area and lower colon.)

A. Wash hands

B. Assemble equipment

C. Identify patient and explain procedure

(NOTE: This procedure is often very uncomfortable for the patient. Assist in positioning the patient and give reassurance during the procedure as needed.)

D. Provide privacy

E. Replace top covers with a bath blanket

F. Place the patient in Sims' position; place a bed protector under hips

G. Fold bath blanket back to expose the patient's buttocks

H. Place the bedpan within convenient reach on the bed or on a chair at the bedside

I. Put on gloves; lubricate well the index finger of one glove

J. Insert lubricated finger gently into the anus, following the curve of the rectal wall, to examine for presence of impaction and its consistency

K. Break off a small piece of fecal material and gently remove it, using the examining finger; place material in the bedpan

JOB SHEET #10

L. Continue removing as much fecal material as can be reached with the finger or until the patient's discomfort warrants discontinuing the procedure

M. Remove soiled gloves and place in paper towels

N. Give retention enema, if prescribed

O. Place patient on bedpan to complete defecation, if needed

P. Wash and dry the patient's anal area; remove bed protector and replace top covers

Q. Provide for the patient's comfort; place communication device conveniently

R. Clean and return equipment to storage

S. Wash hands

T. Report and record procedure and observations

JOB SHEET #10

III. Checklist for removing a fecal impaction

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ____________________		
B. Washed hands; assembled equipment	☐	☐
Comments: ____________________		
C. Identified patient and explained procedure	☐	☐
Comments: ____________________		
D. Provided privacy	☐	☐
Comments: ____________________		
E. Replaced top covers with bath blanket	☐	☐
Comments: ____________________		

JOB SHEET #10

		Performed well	Needs improvement
F.	Placed patient in Sim's position; placed a bed protector under hips	☐	☐

Comments: ______________________________

____

____

G.	Folded bath blanket back to expose patient's buttocks	☐	☐

Comments: ______________________________

____

____

H.	Placed bedpan within convenient reach on the bed or on a chair at bedside	☐	☐

Comments: ______________________________

____

____

I.	Put on gloves; lubricated well the index finger of one glove	☐	☐

Comments: ______________________________

____

____

J.	Inserted lubricated finger gently into the anus, following the curve of the rectal wall, and examined for presence of impaction and its consistency	☐	☐

Comments: ______________________________

____

____

JOB SHEET #10

		Performed well	Needs improvement
K.	Broke off a small piece of fecal material and gently removed it, using the examining finger; placed material in bedpan	☐	☐
	Comments: ____________________		
L.	Continued removing as much fecal material as could be reached with the finger or until the patient's discomfort warranted discontinuing the procedure	☐	☐
	Comments: ____________________		
M.	Removed soiled gloves and placed in paper towels	☐	☐
	Comments: ____________________		
N.	Gave retention enema, if prescribed	☐	☐
	Comments: ____________________		
O.	Placed patient on bedpan to complete defecation, if needed	☐	☐
	Comments: ____________________		

JOB SHEET #10

		Performed well	Needs improvement
P.	Washed and dried the patient's anal area; removed bed protector and replaced top covers	☐	☐
	Comments:		
Q.	Provided for patient's comfort; placed communication device conveniently	☐	☐
	Comments:		
R.	Cleaned and returned equipment to storage	☐	☐
	Comments:		
S.	Washed hands	☐	☐
	Comments:		
T.	Reported and recorded procedure and observations	☐	☐
	Comments:		

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

TEST

NAME ______________________________ SCORE ______________

1. Match terms associated with the digestive system to the correct definitions. Write the correct numbers in the blanks.

______a. Internal secretion of a gland

______b. Ringlike muscle fibers which control an outlet, permitting it to open and close

______c. Organs which are part of the tube extending from mouth to rectum

______d. Study of the digestive system

______e. External secretion of a gland

______f. Mechanical and chemical breakdown of complex foodstuffs into simpler substances which are absorbed into the blood and lymph systems or eliminated from the body

______g. Muscular membrane that separates the abdominal cavity from the thoracic cavity

______h. Chemical substances, secreted by an endocrine gland, which regulate the functions of other organs

______i. Short, vascular, threadlike projections covering the mucous membrane of the small intestine

______j. Starches and sugars

______k. Rhythmical waves of contraction which move the food along the digestive tract

______l. Body waste, such as food residue, bacteria, epithelium, and mucus, discharged from the intestines

______m. Thick, sticky fluid secreted by some membranes and glands

______n. Any poisonous substance of microbic, vegetable, mineral, or animal origin

1. Hormones
2. Villi
3. Feces
4. Digestion
5. Peristalsis
6. Exocrine
7. Carbohydrates
8. Sphincter
9. Mucus
10. Gastroenterology
11. Endocrine
12. Alimentary canal
13. Diaphragm
14. Toxin

_____o. Protein substance in the blood developed by the body, usually in reaction to a specific foreign substance

_____p. Nearly liquid mixture of partly digested food and digestive secretions found in the stomach and small intestine

_____q. Protein in the blood which aids in clotting

_____r. Organic, fatlike compound found in animal fat, bile, blood, brain tissue, liver, and other parts of the body

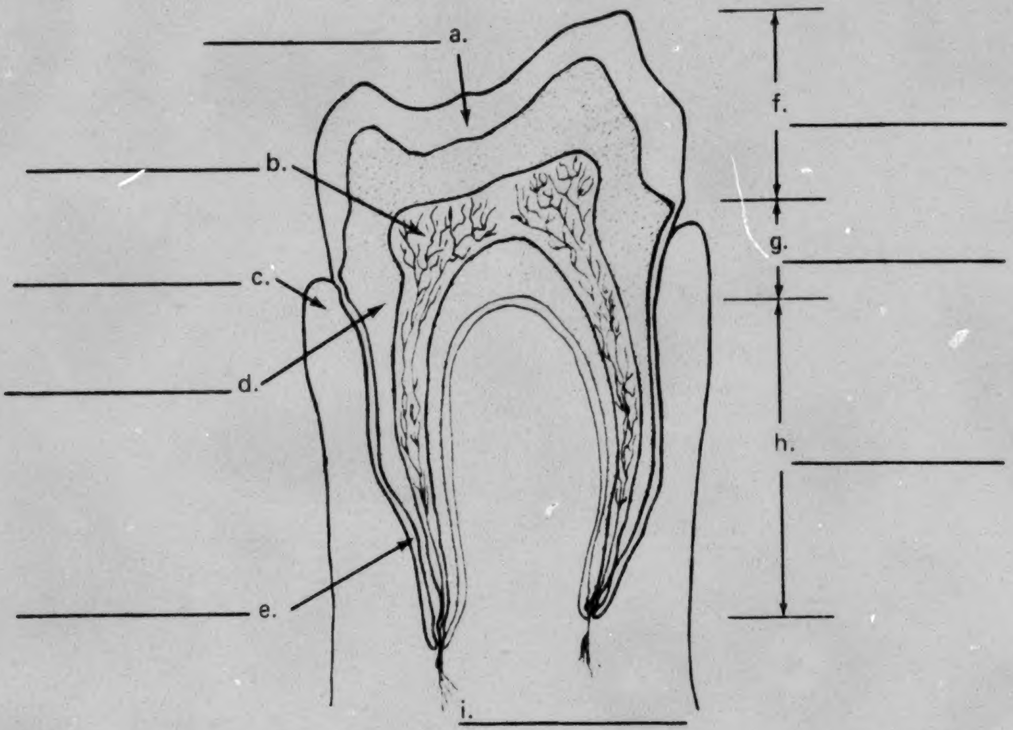
_____s. Mucoprotein found in gastric juice; necessary for the assimilation of vitamin B_{12}

_____t. One of the simple proteins

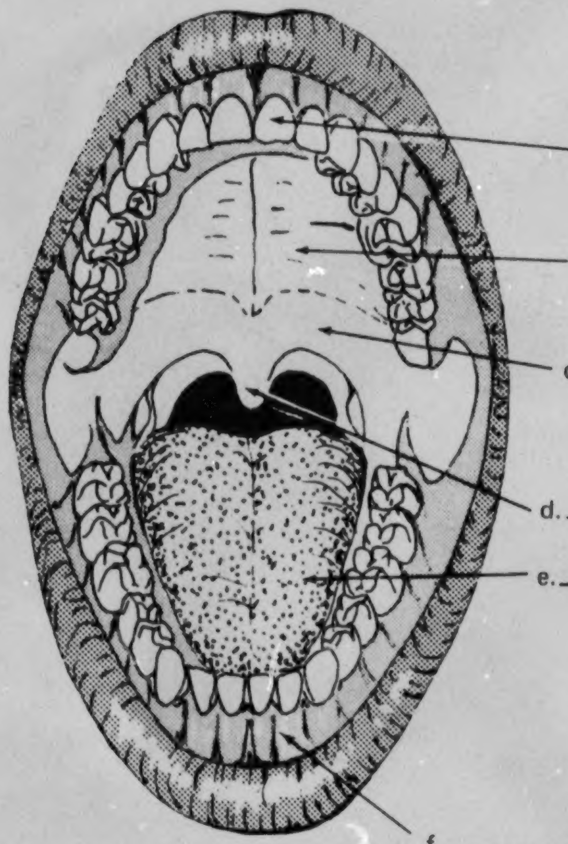
15. Intrinsic factor
16. Cholesterol
17. Antibody
18. Fibrinogen
19. Chyme
20. Albumin

2. Identify the parts of a tooth and adjacent structures on the diagram. Write the correct names in the blanks.

Enamel
Crown
Neck
Root
Pulp cavity
Peridontal tissue
Dentin
Cementum
Fifth cranial nerve



3. Label the structures of the mouth. Write the answers in the blanks.



a. ______________________

b. ______________________

c. ______________________

d. ______________________

e. ______________________

f. ______________________

4. Select from the following list the salivary glands. Write an "X" in the correct blanks.

_____a. Sublingual

_____b. Adrenal

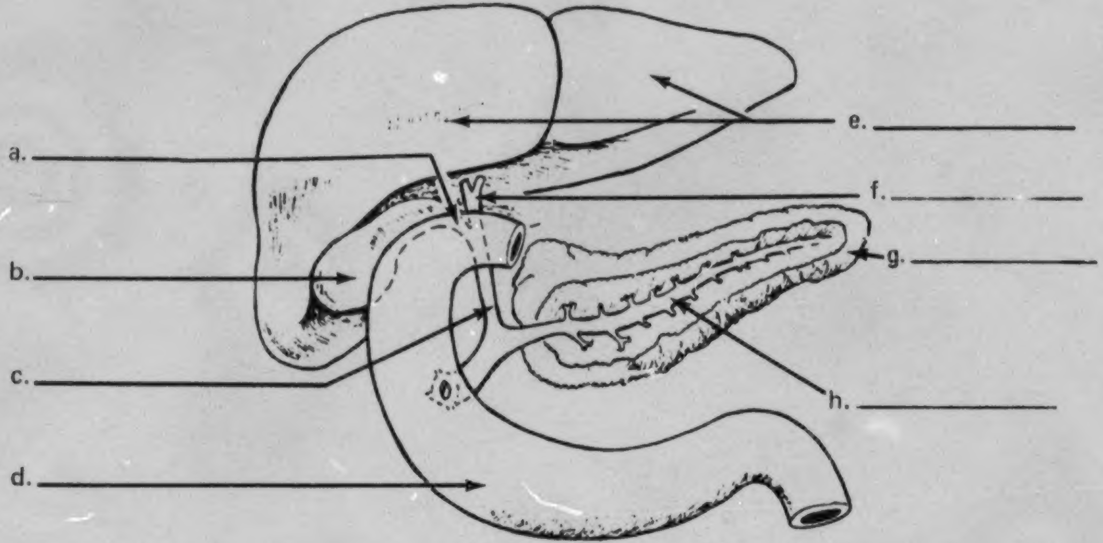
_____c. Subtemporal

_____d. Parotid

_____e. Submaxillary

_____f. Bartholin

5. Label the liver, pancreas, and adjacent structures. Write the correct answers in the blanks.



6. Distinguish between functions of the liver, gallbladder, and pancreas. Write an "L" before the functions of the liver, a "G" before the functions of the gallbladder, and a "P" before the functions of the pancreas.

______a. Stores vitamins A, D, K, and B_{12}

______b. Manufactures bile which aids in metabolism of fats

______c. Stores bile until needed for digestion

______d. Metabolizes carbohydrates, fats, and proteins

______e. Produces insulin, an endocrine secretion which aids in carbohydrate metabolism

______f. Manufactures cholesterol

______g. Manufactures blood proteins

______h. Produces pancreatin, an exocrine secretion which is emptied into the duodenum

______i. Stores simple sugars

______j. Removes toxins, bacteria, and worn out blood cells

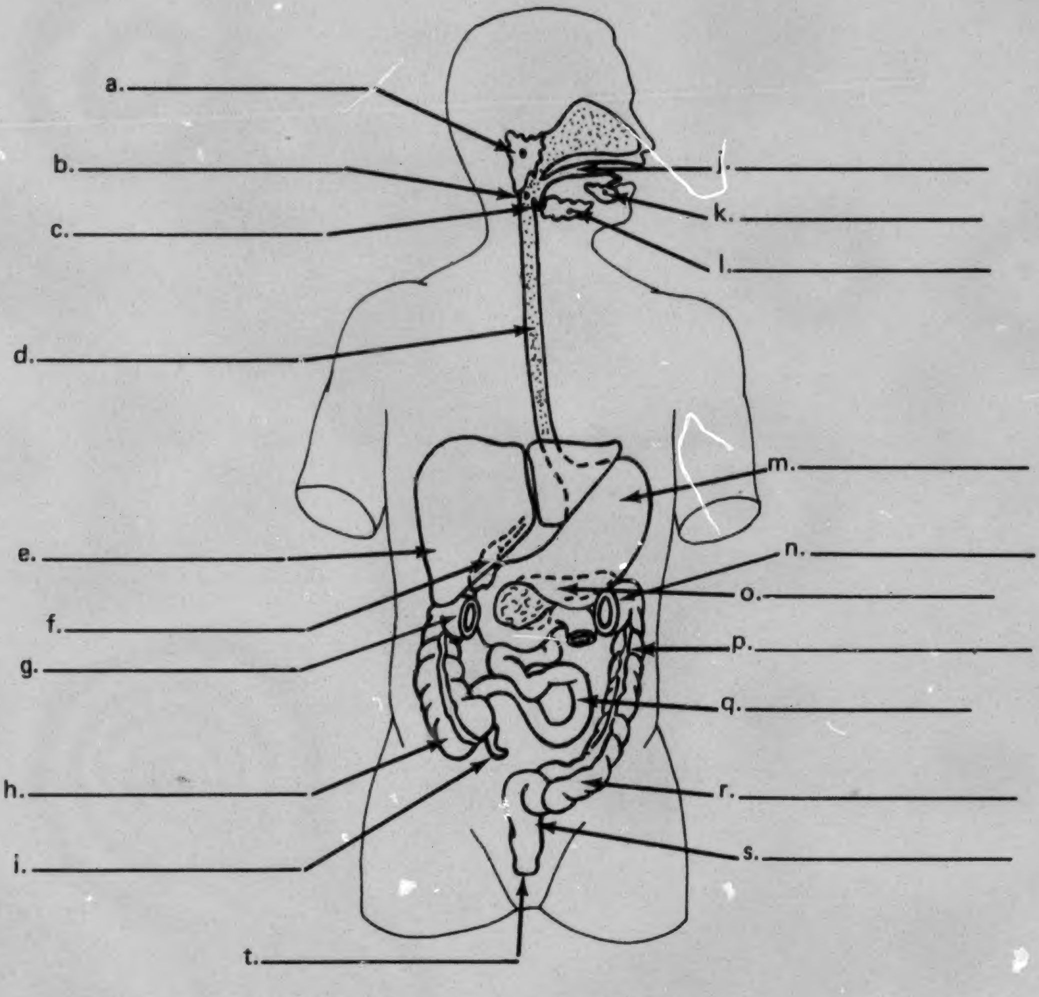
______k. Removes waste products from the blood

______l. Forms antibodies

7. Identify the digestive organs. Write the correct answers in the blanks.

Small intestine
Sublingual gland
Pancreas
Liver
Oral cavity (mouth)
Gallbladder
Esophagus
Submaxillary gland
Cecum
Large intestine (colon)

Stomach
Parotid gland
Epiglottis
Pharynx
Anal canal
Splenic flexure
Sigmoid
Appendix
Rectum
Hepatic flexure



8. Distinguish between mechanical and chemical digestion. Write an "M" for mechanical digestion and a "C" for chemical digestion in the blanks.

_____a. Muscles in the tongue, jaw, pharynx, esophagus, stomach, and intestines furnish the needed power

_____b. Moistens and mixes food with digestive juices

_____c. Carbohydrates are changed to simple sugars in the mouth and small intestine

_____d. Begins in the mouth with chewing and continues along the alimentary tract with swallowing in the esophagus and peristalsis in the stomach and small intestine

_____e. Proteins are changed into amino acids in the stomach and small intestine

_____f. Digestive juices and enzymes cause chemical changes in the food

_____g. Breaks foods into smaller particles

_____h. Chyme is absorbed through the villi in the small intestine into the blood and lymph systems

_____i. Fats are turned into fatty acids in the stomach and small intestine

_____j. Moves food along the digestive tract

9. List enzymes produced in the mouth, stomach, and small intestine, and their purposes.

a. Mouth-- ______________________________

____

____

____

____

b. Stomach-- ______________________________

____

____

____

____

c. Small intestine-- ____

____

____

____

____

10. Select from the following list functions of the esophagus. Write an "X" in the correct blanks.

_____a. Serves as tubular passageway for food from mouth to stomach

_____b. Secretes mucus to aid in food movement

_____c. Aids in skeletal muscle movement

_____d. Peristalsis begins

_____e. Water absorption begins

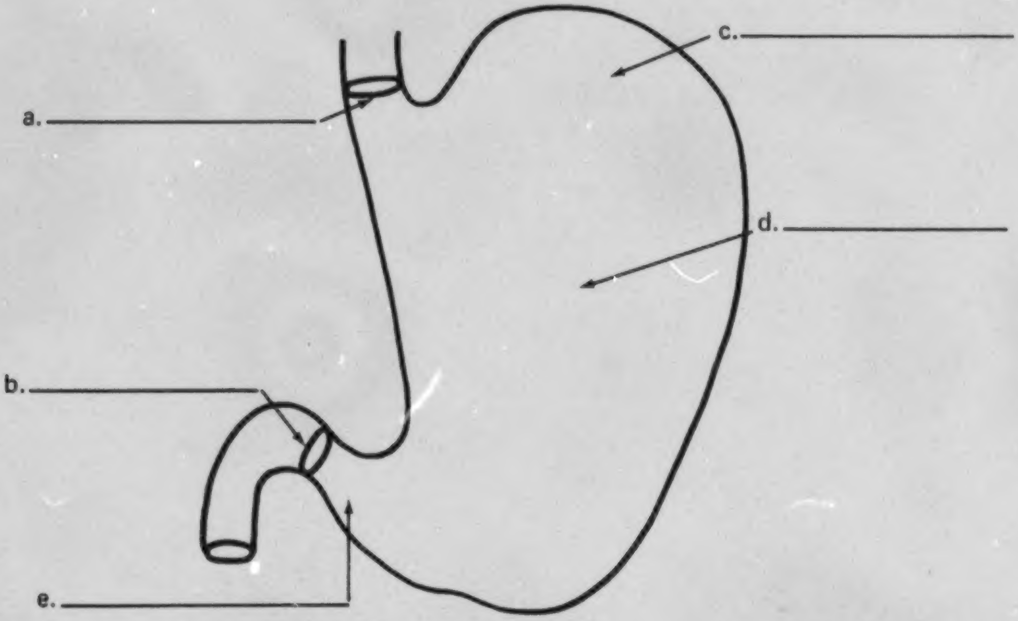
_____f. Epiglottis prevents food from entering the trachea

11. Identify parts of the stomach. Write the correct answers in the blanks.

Cardiac sphincter
Pylorus

Fundus
Pyloric sphincter

Body



12. Select from the following list functions of the stomach. Write an "X" in the correct blanks.

______a. Serves as a reservoir for food for the three or four hours needed for proper mixing

______b. Releases cardiac enzymes

______c. Destroys red blood cells

______d. Begins digestion of proteins

______e. Prepares food for digestion by changing it from a solid to a semi-fluid material (chyme) by peristalsis

______f. Provides for the reabsorption of water

______g. Secretes approximately 2000 cc of gastric juice per day

13. Match components of gastric juice to their functions. Write the correct numbers in the blanks.

______a. Essential in absorption of vitamin B_{12}

______b. A solvent

______c. Softens connective tissue in meat, kills bacteria, aids in absorption of iron, and activates at least one of the stomach enzymes

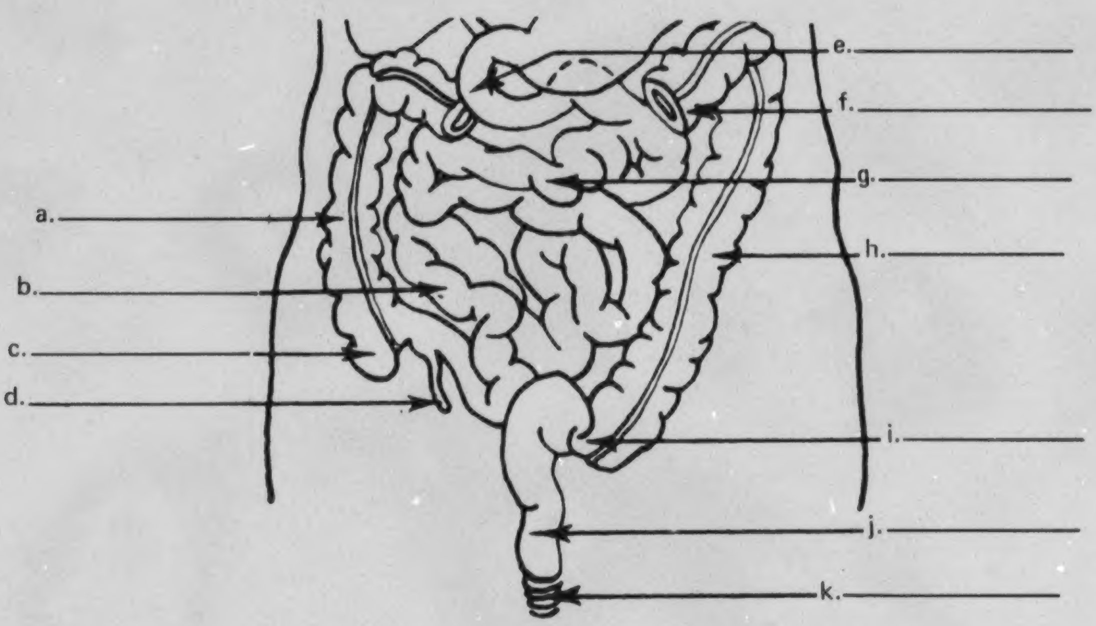
______d. Mixture of proteins in mucus that protects the lining of the stomach

______e. Act chemically to aid digestion

1. Mucin
2. Hydrochloric acid
3. Intrinsic factor
4. Water
5. Enzymes

14. Identify parts of the small intestine and large intestine. Write the correct answers in the blanks.

Descending colon
Appendix
Ascending colon
Cecum
Duodenum
Transverse colon (cut)
Jejunum
Rectum
Anus
Ileum
Sigmoid colon



15. Distinguish between functions of the small and large intestine. Write an "S" for functions of the small intestine and an "L" for functions of the large intestine.

______a. Provides a site for bacteria which produce Vitamin K and other bacteria that aid in absorption

______b. Empties bile from the liver and pancreatic juice into the duodenum

______c. Secretes mucus to aid in the movement of feces

______d. Reabsorbs water, mineral salts, and vitamins

______e. Digests and absorbs greater part of food

______f. Secretes intestinal juices

16. Match terms associated with metabolism to their definitions. Write the correct numbers in the blanks.

______a. Process of breaking down complex substances into simple substances for excretion and energy production

______b. Unit used to measure fuel value of food

______c. Chemical process in organisms which turns food substances into heat and energy for body use

______d. Measurement of oxygen needed when the body is at rest and performing only necessary functions

______e. Amount of energy needed to sustain life

______f. Process of building, maintaining, and repairing tissue

1. Metabolism
2. Anabolism
3. Catabolism
4. Basal metabolism rate
5. Calorie
6. Basal metabolism

17. Select from the following list factors which affect the basal metabolism rate (BMR). Write an "X" in the correct blanks.

______a. Emotional stress

______b. Intelligence quotient

______c. Skin pigmentation

______d. Age

______e. Internal secretions

______f. Body shape and size

______g. Sex

18. List factors that affect energy requirements.

a. ____

b. ____

c. ____

d. ____

e. ____

f. ____

g. ____

h. ____

i. ____________________

j. ____________________

k. ____________________

l. ____________________

19. Arrange in order steps used to compute calorie requirements. Write a "1" before the first step, a "2" before the second step, and so on.

_____a. Determine calories needed

_____b. Multiply the ideal weight by calories needed to determine daily calorie requirement

_____c. Determine ideal weight for height and body build

20. Match terms associated with elimination in the digestive system to their definitions. Write the correct numbers in the blanks.

_____a. Semi-solid medicated substance for introduction into the rectum, vagina, or urethra

_____b. Chair with an open seat to accommodate a bedpan or other receptacle for feces and urine

_____c. Inflammation of the colon

_____d. Collection of hardened feces in the rectum and/or sigmoid

_____e. Elimination of waste and undigested food from the rectum

_____f. Frequent passage of watery bowel movements

_____g. Gas in the digestive tract

_____h. Small, flat bedpan used for patients who are in casts or are unable to use a conventional bedpan

_____i. Examination of the sigmoid with a special instrument

_____j. Utensil used by a female for defecation and urination and by the male for defecation

_____k. Inability to retain urine or feces due to loss of sphincter control

_____l. Growths attached to the mucus membranes of the nose, bladder, colon, or uterus

1. Fecal impaction
2. Suppository
3. Colitis
4. Commode
5. Defecation
6. Flatus
7. Incontinence
8. Bedpan
9. Fracture pan
10. Sigmoidoscopy
11. Diarrhea
12. Polyps

______m. Dilated blood vessels in the anal area

______n. Introduction of fluid into the rectum and colon

______o. External opening of the rectum

______p. Examination of the rectum with a special instrument

______q. Indigestible, fibrous material found in plants that helps stimulate peristalsis and aids in intestinal elimination

______r. Inspection of body organs or cavities by a scope

______s. Difficulty in defecation, usually with hard and dry fecal material

13. Enema
14. Hemorrhoids
15. Proctoscopy
16. Anus
17. Cellulose
18. Endoscopy
19. Constipation

21. Describe the mechanism of rectal reflex.

____

____

____

____

____

____

22. List factors that inhibit elimination in the hospital setting.

a. ______________________________
b. ______________________________
c. ______________________________
d. ______________________________
e. ______________________________
f. ______________________________
g. ______________________________
h. ______________________________

23. Select from the following list nursing measures that will aid elimination. Write an "X" in the correct blanks.

_____a. Restrict fluids

_____b. Establish a routine in an effort to control incontinence

_____c. Assist in determining adequacy of elimination

_____d. Rub back at hour of sleep

_____e. Encourage patient to follow a diet that contains cellulose

_____f. Encourage isometric relaxing techniques

_____g. Provide for adequate hydration

_____h. Provide privacy for the patient during elimination

_____i. Assess elimination function

_____j. Distract patient

_____k. Keep a daily record of elimination

_____l. Provide opportunity for elimination at regular intervals to prevent bladder distention and constipation

24. List sources of cellulose.

a. ______________________________

b. ______________________________

c. ______________________________

25. List characteristics of defecation to observe.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

26. Distinguish between types of enemas. Write an "N" for a non-retention or cleansing type enema and an "R" for a retention type enema in the blanks.

_____a. Emollient

_____b. Physiologic saline

_____c. Hypertonic solutions of salts

_____d. Lubricating

_____e. Medicated

_____f. Carminitive

_____g. Anthelmintic

_____h. Soapsuds

27. Calculate calories.

28. Demonstrate the ability to:

    a. Give and remove a bedpan and/or fracture pan.

    b. Assist the patient to the bathroom.

    c. Assist the patient in using the commode.

    d. Collect a stool specimen.

    e. Give a cleansing enema.

    f. Give a retention enema.

    g. Give a Harris Flush/colonic irrigation.

    h. Insert a colon tube.

    i. Insert a rectal suppository.

    j. Remove a fecal impaction.

    (NOTE: If activities 27 and 28 have not been finished before the test, ask the instructor when they should be completed.)

DIGESTIVE SYSTEM AND METABOLISM
UNIT VIII

ANSWERS TO TEST

1. a. 11
   b. 8
   c. 12
   d. 10
   e. 6
   f. 4
   g. 13
   h. 1
   i. 2
   j. 7
   k. 5
   l. 3
   m. 9
   n. 14
   o. 17
   p. 19
   q. 18
   r. 16
   s. 15
   t. 20
2. a. Enamel
   b. Pulp cavity
   c. Peridontal tissue
   d. Dentin
   e. Cementum
   f. Crown
   g. Neck
   h. Root
   i. Fifth cranial nerve
3. a. Teeth
   b. Hard palate
   c. Soft palate
   d. Uvula
   e. Tongue
   f. Gums
4. a, d, e
5. a. Cystic duct
   b. Gallbladder
   c. Common bile duct
   d. Duodenum
   e. Liver
   f. Hepatic duct
   g. Pancreas
   h. Pancreatic duct

6. a. L
   b. L
   c. G
   d. L
   e. P
   f. L
   g. L
   h. P
   i. L
   j. L
   k. L
   l. L

7. a. Parotid gland
   b. Pharynx
   c. Epiglottis
   d. Esophagus
   e. Liver
   f. Gallbladder
   g. Hepatic flexure
   h. Cecum
   i. Appendix
   j. Oral cavity (mouth)
   k. Sublingual gland
   l. Submaxillary gland
   m. Stomach
   n. Splenic flexure
   o. Pancreas
   p. Large intestine (colon)
   q. Small intestine
   r. Sigmoid
   s. Rectum
   t. Anal canal

8. a. M
   b. M
   c. C
   d. M
   e. C
   f. C
   g. M
   h. M
   i. C
   j. M

9. a. Mouth--Ptyalin in saliva begins digestion of starches
   b. Stomach--Gastric juice including hydrochloric acid
      1) Pepsin begins digestion of proteins
      2) Lipase acts upon emulsified fats
      3) Rennin acts upon milk protein
   c. Small intestine
      1) Bile from liver emulsifies fats
      2) Trypsin from pancreas digests proteins

3) Amylopsin from pancreas digests starches
4) Steapsin from pancreas digests fats
5) Erepsin from intestinal lining digests proteins
6) Lactase, maltase, and sucrase digest sugars

10. a, b, d, f

11. a. Cardiac sphincter
    b. Pyloric sphincter
    c. Fundus
    d. Body
    e. Pylorus

12. a, d, e, g

13. a. 3
    b. 4
    c. 2
    d. 1
    e. 5

14. a. Ascending colon
    b. Ileum
    c. Cecum
    d. Appendix
    e. Duodenum
    f. Transverse colon (cut)
    g. Jejunum
    h. Descending colon
    i. Sigmoid colon
    j. Rectum
    k. Anus

15. a. L
b. S
c. L
d. L
e. S
f. S

16. a. 3
b. 5
c. 1
d. 4
e. 6
f. 2

17. a, d, e, f, g

18. a. Physical activity
b. Age
c. Size
d. Sex
e. Endocrine secretions
f. Body temperature
g. Medications
h. Emotions
i. External climate
j. Sleep
k. Nutrition
l. Pregnancy

19. a. 2
b. 3
c. 1

20. a. 2
b. 4
c. 3
d. 1
e. 5
f. 11
g. 6
h. 9
i. 10
j. 8
k. 7
l. 12
m. 14
n. 13
o. 16
p. 15
q. 17
r. 18
s. 19

21. Description should include:

    a. Rectal control is similar to urethral control with an internal and external sphincter

    b. When the sigmoid and rectum become distended with fecal material, afferent impulses are transmitted to the spinal cord which in turn excites the muscle walls of the rectum to contract and the internal sphincter to relax

    c. The external sphincter is consciously controlled and in the normal person these rectal reflexes can be inhibited adversely until constipation results

22. a. Lack of privacy

    b. Immobility

    c. Diet changes

    d. Medications such as narcotics or barbiturates

    e. Fluid intake

    f. Uncomfortable with use of bedpan

    g. Weakness because of illness or surgery

    h. Psychological or emotional stress

23. b, e, g, h, i, k, l

24. a. Vegetables

    b. Fruits

    c. Whole grain products

25. a. Number of movements per day

    b. Consistency, shape, color, and odor

    c. Presence of any unusual matter such as blood or mucus

    d. Expulsion of flatus

    e. Symptoms of pain, abdominal distention, or cramping

26. a. R

    b. N

    c. N

    d. R

    e. R

    f. N

    g. R

    h. N

27. Evaluated to the satisfaction of the instructor

28. Performance skills evaluated to the satisfaction of the instructor

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of the circulatory system in assessing the cardiovascular system and in accurately taking vital signs. The student should also be able to apply various forms of heat and cold treatments that have an effect on the circulatory system. This knowledge will be evidenced by completion of assignment sheets, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the circulatory system to the correct definitions.
2. Select from a list functions of the circulatory system.
3. Match structures of the heart to their functions.
4. Describe the blood supply to the heart.
5. Distinguish between the structures of the blood vessels.
6. Describe the physiology of the heart.
7. Arrange in order the process of circulation of blood.
8. Identify the principal arteries and veins.
9. Label the vessels that supply blood to the head.
10. List in order the process of portal circulation.
11. Describe the lymphatic system.
12. Select from a list functions of the spleen.
13. Match terms associated with vital signs to the correct definitions.
14. State reasons why knowledge of vital signs is important.
15. Describe regulation of body temperature.
16. Distinguish between indications for specific temperature sites.
17. Complete a chart showing temperature ranges, conditions, and sites where taken.
18. List factors that influence body temperature.

19. Label sites where pulse may be taken.
20. Match average pulse rates to specific groups.
21. Describe criteria used when assessing pulse and respiration rates.
22. List factors that influence heart and pulse rate.
23. List factors that affect respiration.
24. Match terms to describe respiration to their correct definitions.
25. List factors affecting blood pressure.
26. Label sites for taking blood pressure.
27. Describe criteria to observe when assessing vital signs.
28. Match terms associated with application of heat and cold to the correct definitions.
29. Distinguish between local effects of heat and cold.
30. Distinguish between systemic effects of heat and cold.
31. Distinguish between forms of heat.
32. Distinguish between forms of cold.
33. List temperature ranges used for applications of heat and cold.
34. Trace a drop of blood through the heart.
35. Assess vital signs.
36. Read Fahrenheit and Celsius thermometers.
37. Convert Fahrenheit and Celsius readings.
38. Chart temperature, pulse, respirations, and blood pressure.
39. Demonstrate the ability to:
    a. Take oral temperature.
    b. Take rectal temperature.
    c. Take axillary temperature.
    d. Clean thermometers.
    e. Take pulse and respirations.
    f. Take apical/radial pulse.

g. Take blood pressure.

h. Use a hot water bottle.

i. Use an aqua pad/K-pad.

j. Use an electric heating pad.

k. Administer a chemical hot pack.

l. Use a heat lamp.

m. Use a heat cradle.

n. Apply warm, wet compresses.

o. Use an ice bag or ice collar.

p. Apply a chemical cold pack.

q. Apply a cold, moist pack.

r. Give a cool or tepid sponge bath.

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information sheet and make transparencies.

   C. Discuss unit and specific objectives.

   D. Discuss information sheet.

   E. Use model to show anatomy.

   F. Dissect animal heart, liver, spleen, and large vessels to demonstrate anatomy.

   G. Ask EKG technician to demonstrate equipment used to run an electrocardiogram.

   H. Visit the respiratory therapy department and have the therapist demonstrate equipment and discuss diagnostic procedures used to assess respiration.

   I. Provide assignment sheets and job sheets.

   J. Provide equipment to complete job sheets with thermometers.

   K. Demonstrate to students how to assess vital signs.

   L. Provide students with graphic sheets used in your institution.

   M. Use Assignment Sheet #2 after teaching how to take vital signs (Job Sheet #1 through #7).

   N. Provide equipment and demonstrate skills in clinical laboratory area.

   O. Allow students to return the demonstrations when they master the skill.

   P. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Transparency masters

      1. TM 1--Structure of the Heart

      2. TM 2--Bicuspid Valves

3. TM 3--Blood Supply to the Heart
4. TM 4--Coronary Arteries
5. TM 5--Capillary Function
6. TM 6--Conduction System of the Heart
7. TM 7--The Heart Pumping Cycle
8. TM 8--The Portal Circulation
9. TM 9--The Lymphatic System

D. Assignment sheets

1. Assignment Sheet #1--Trace a Drop of Blood Through the Heart
2. Assignment Sheet #2--Assess Vital Signs
3. Assignment Sheet #3--Read Fahrenheit and Celsius Thermometers
4. Assignment Sheet #4--Convert Fahrenheit and Celsius Readings
5. Assignment Sheet #5--Chart Temperature, Pulse, Respirations, and Blood Pressure

E. Answers to assignment sheets

F. Job sheets

1. Job Sheet #1--Take Oral Temperature
2. Job Sheet #2--Take Rectal Temperature
3. Job Sheet #3--Take Axillary Temperature
4. Job Sheet #4--Clean Thermometers
5. Job Sheet #5--Take Pulse and Respirations
6. Job Sheet #6--Take Apical/Radial Pulse
7. Job Sheet #7--Take Blood Pressure
8. Job Sheet #8--Use a Hot Water Bottle
9. Job Sheet #9--Use an Aqua Pad/K-Pad
10. Job Sheet #10--Use an Electric Heating Pad
11. Job Sheet #11--Administer a Chemical Hot Pack
12. Job Sheet #12--Use a Heat Lamp
13. Job Sheet #13--Use a Heat Cradle

14. Job Sheet #14--Apply Warm, Wet Compresses
15. Job Sheet #15--Use an Ice Bag or Ice Collar
16. Job Sheet #16--Apply a Chemical Cold Pack
17. Job Sheet #17--Apply a Cold, Moist Pack
18. Job Sheet #18--Give a Cool or Tepid Sponge Bath

G. Test

H. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study*. Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

B. Sloan, Jamee. *Health Service Careers*. Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1979.

C. Sloan, Jamee. *Medical Assistant*. Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1981.

D. *Assessing Vital Functions Accurately. Nursing Skillbook Series*. Horsham, Pennsylvania: Intermed Communications, Inc., 1978.

E. Jacob, Stanley W.; Francone, Clarice; and Lossow, Walter J. *Structure and Function in Man*. Philadelphia: W.B. Saunders Company, 1978.

IV. Film--*I Am Joe's Heart*. Color, 26 min., Pyramid Films, 1973. Available from Pyramid Films, Box 1048, Santa Monica, California 90406.

(NOTE: This film is available on a free-loan basis *only* to Oklahoma teachers from the Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order from the address listed above.)

V. Filmstrips:

(NOTE: The following filmstrips are available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.)

A. *Abnormal Breath Sounds.*

B. *Taking the Patient's Temperature.*

C. *Temperature, Pulse, and Respiration.*

D. *Blood Pressure*.

E. *How Your Heart and Circulation Work*.

F. *Normal Heart and the EKG*.

G. *How to Take an Electrocardiogram*.

VI. Polar motion spinner and transparencies--Available from American Animation, Inc., Six East Spruce Street, Box 335, Moorestown, New Jersey 00157.

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

INFORMATION SHEET

I. Terms associated with the circulatory system

A. Circulatory system--Cardiovascular organs consisting of the heart, blood vessels (arteries, arterioles, capillaries, venules, veins, and sinuses), and the lymphatic system

B. Cardiology--Study of the heart

C. Vein--Blood vessel that carries blood to the heart

D. Artery--Blood vessel that carries blood from the heart

E. Arteriole--Very small artery that, at its distal end, leads to a capillary

F. Capillary--Minute blood vessel between arterioles and venules, or a similar channel containing lymph

G. Cusp--Flap of valves that open and close

H. Valve--Membranous structure in a hollow organ or passage that temporarily closes to permit flow of fluid in one direction only

I. Aorta--Main trunk of the arterial system; largest artery

J. Coronary--Vessels which supply blood to the walls of the heart

K. S-A node--Pacemaker; small mass of specialized muscle fibers in the wall of the right atrium where the rhythm of the cardiac contraction is usually established

L. A-V node--Mass of specialized muscle fibers located in the septum at the junction of the four chambers

M. Septum--Wall down the middle of the heart that divides into right and left sides

N. Venous sinuses--Network of spaces in the dura mater which drain blood from the brain into the jugular vein

(NOTE: Dura mater is the outer layer of the meninges, the covering of the brain.)

O. Lymph nodes--Small bundles of special lymphoid tissue; also called lymph glands

P. Circle of Willis--Arteries that surround the base of the brain formed by communicating branches of cerebral arteries

INFORMATION SHEET

Q. Carbon dioxide--Colorless gas, heavier than air and exhaled by all animals

R. Oxygen--Non-metallic element occurring freely in the atmosphere as a colorless, odorless, tasteless gas

II. Functions of the circulatory system

A. Transportation of food and oxygen to body cells

B. Transportation of waste products to excretory organs

C. Distribution of hormones and antibodies

D. Aid in control of body temperature

E. Maintenance of homeostasis

(NOTE: Homeostasis in the body relates to the state of chemical balance between the cell and its environment.)

III. Structures of the heart and their functions (Transparencies 1 and 2)

A. Layers of the heart wall

1. Endocardium--Very smooth layer of cells that lines the inside of the heart and forms the valves
2. Myocardium--Middle and thickest layer; the muscle layer
3. Pericardium--Covering of the heart; double membrane that secretes fluid which provides lubrication for the heart action, preventing friction

B. Chambers

1. Right atrium--Thin-walled space that receives venous blood as it returns from the body
2. Right ventricle--Thicker-walled space that receives the blood from the right atrium and pumps it into the lungs
3. Left atrium--Receives oxygenated blood from the lungs
4. Left ventricle--Thickest-walled space of the heart; receives blood from the left atrium and pumps it to the rest of the body through the arteries

(NOTE: The right and left sides of the heart are separated from each other by the septum.)

INFORMATION SHEET

C. Valves

1. Tricuspid--Closes to prevent any blood from flowing back into the right atrium when the right ventricle begins pumping

   (NOTE: This valve is also called atrioventricular valve.)

2. Pulmonary semilunar--Between the right ventricle and the pulmonary artery which leads to the lungs; prevents blood from returning to the right ventricle

3. Bicuspid or mitral--Closes to prevent blood from returning to the left atrium when the left ventricle begins its contractions

4. Aortic semilunar--Between the left ventricle and the aorta; prevents return of the blood to the left ventricle

IV. Blood supply to the heart (Transparencies 3 and 4)

A. Coronary arteries that branch off the aorta just above the aortic semilunar valve supply blood to the myocardium

B. Left branch supplies blood to the left atrium and ventricle; right branch supplies blood to the right side

C. Coronary arteries can increase or decrease the blood supply as needed

(NOTE: Demands made upon the heart by exercise, emotional stress, sleep, and other body actions influence the heart's need for oxygen.)

D. Coronary arteries become smaller as they enter the heart wall and nourish the tissue through capillaries, then drain into venules and coronary veins that carry blood to right atrium

(NOTE: The arteries which supply the heart muscle fit around the top of the heart like a crown, hence the name coronary.)

V. Structures of the blood vessels (Transparency 5)

A. Arteries

1. Have the thickest walls of all blood vessels; are very muscular; walls have three layers of muscles with central layer of muscular tissue thickest

2. Carry blood from the pumping chambers (ventricles) to the organs

   (NOTE: Blood pressure is highest in the arteries nearest the heart. As the blood pressure decreases, the thickness of the arteries also decreases.)

INFORMATION SHEET

B. Capillaries

1. Have a single layer of endothelial cells which forms a tube barely large enough to permit passage of blood cells

2. Transport materials necessary to life of cells through walls into tissues; waste products are absorbed from tissues

C. Veins

1. Have less muscle tissue; are equipped with one-way valves which permit the blood to flow in only one direction

2. Transport blood back to the heart under low pressure

VI. Physiology of the heart (Transparencies 6 and 7)

A. Cardiac cycle

1. Atria contract and ventricles rest

2. Ventricles contract; atria relax and fill with blood

(NOTE: The period of contraction is known as the *systole* and the period of relaxation is known as the *diastole*.)

B. Nerve control

1. Heart contracts rhythmically even though its outside nerve supply may be interrupted or destroyed

(NOTE: Without the outside nerve supply, the heart will beat at a slower rate.)

2. Nerve supply comes from part of the autonomic nervous system, which has an accelerating and braking control

C. Conduction system

(NOTE: This system consists of a combination of nerve and muscle tissue which regulates the order of contractions.)

1. Contraction begins in the S-A node, then travels as the wave passes through the atrial muscles, causing them to contract

2. A-V node is then stimulated and transmits the wave to the Bundle of His, which stimulates the ventricular muscles, causing them to contract

(NOTE: The Bundle of His is a small band of cardiac muscle fibers that is responsible for most conduction of nerve impulses. If this muscle is damaged, it can produce heart block.)

INFORMATION SHEET

D. Heart sounds and murmurs

1. Normal heart sounds are usually described by two syllables, lubb and dupp

2. First or systolic sound (lubb) is due to closure of the cuspid valves and contraction of the ventricles

3. Second or diastolic sound (dupp) is due to closure of the semilunar valves

   (NOTE: Murmurs and abnormal heart sounds may be due to a faulty valve or one scarred by disease.)

VII. Process of circulation of blood (Assignment Sheet #1)

A. Systemic (entire body)

1. Left ventricle
2. Aorta
3. Arteries
4. Arterioles
5. Capillaries

   (NOTE: Food and oxygen are exchanged here for waste products and carbon dioxide.)

6. Venules
7. Veins
8. Inferior or superior vena cava
9. Right atrium

B. Pulmonary (lungs)

1. Right ventricle
2. Pulmonary artery
3. Arterioles
4. Capillaries

   (NOTE: Carbon dioxide is exchanged here for oxygen.)

5. Venules

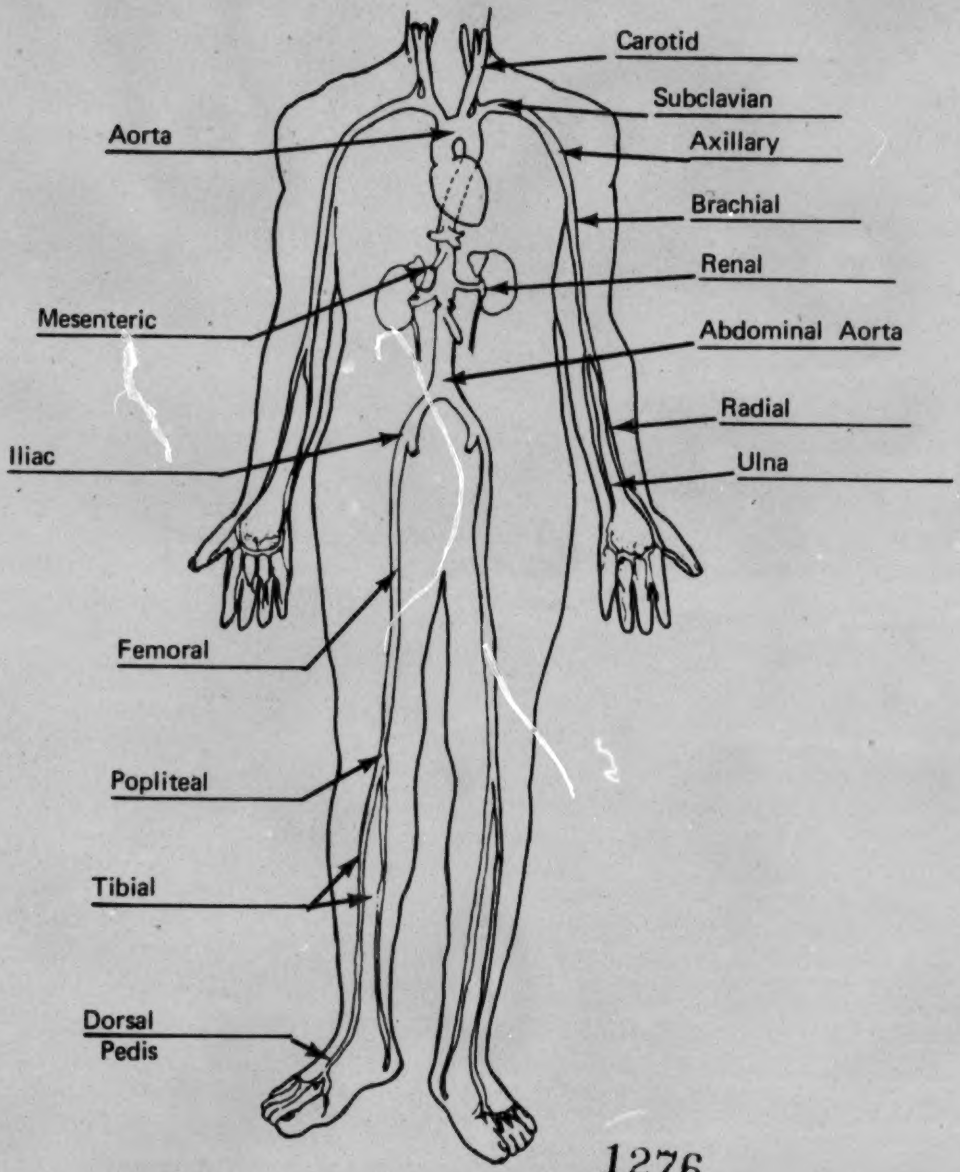
INFORMATION SHEET

6. Pulmonary vein

7. Left atrium

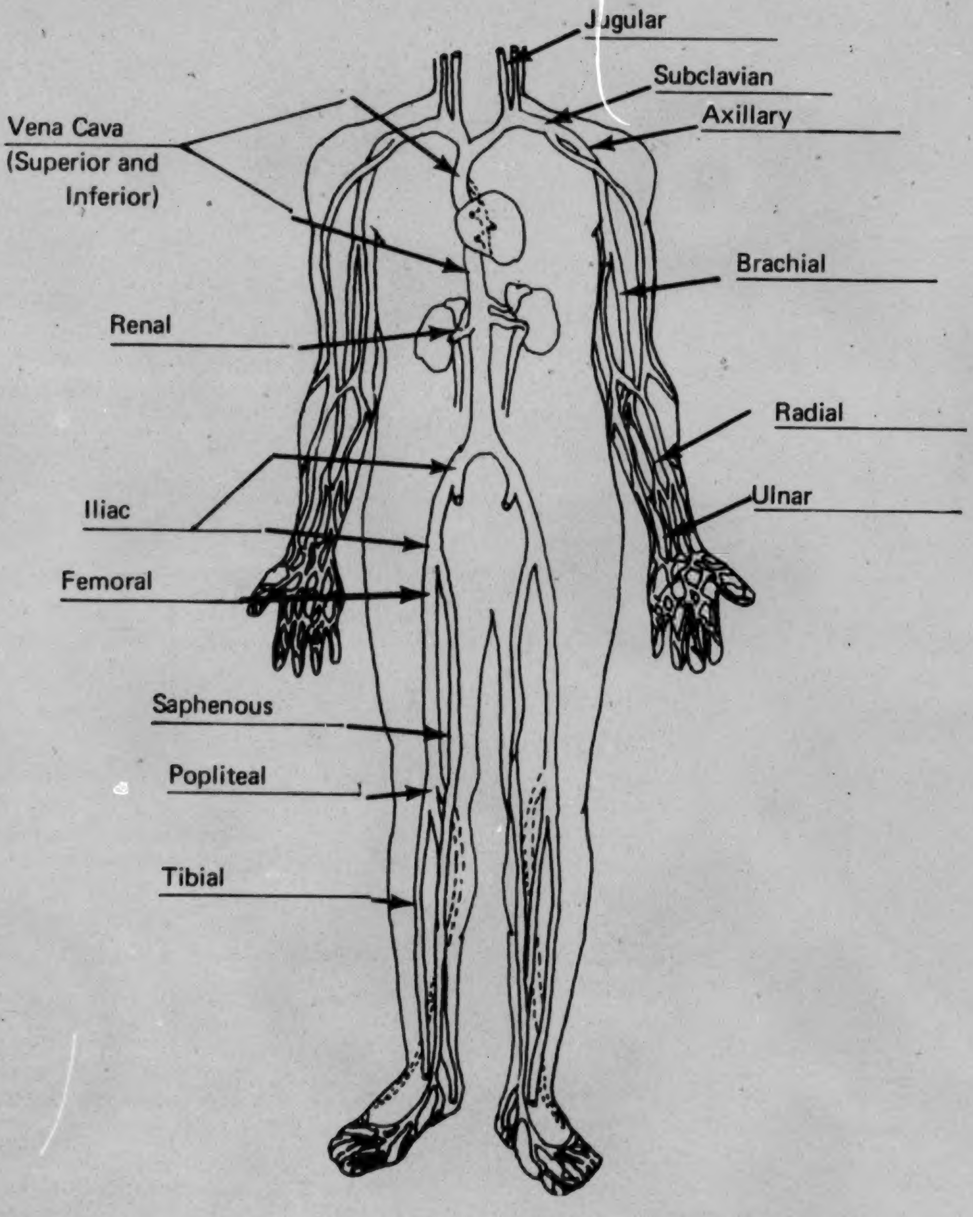
VIII. Principal arteries and veins

A. Arteries


Carotid
Subclavian
Aorta
Axillary
Brachial
Renal
Mesenteric
Abdominal Aorta
Radial
Iliac
Ulna
Femoral
Popliteal
Tibial
Dorsal Pedis

INFORMATION SHEET

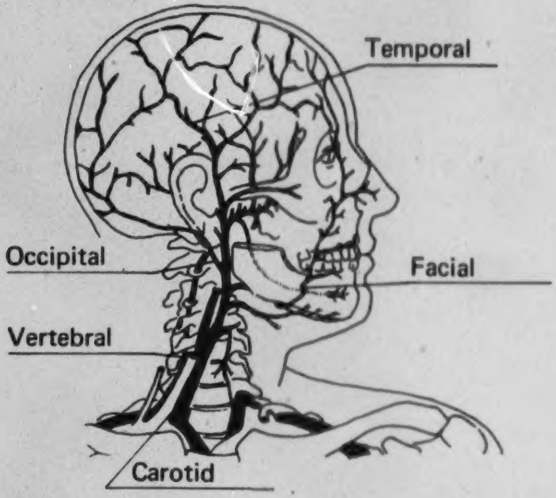
B. Veins


Jugular
Subclavian
Axillary
Vena Cava
(Superior and
Inferior)
Brachial
Renal
Radial
Ulnar
Iliac
Femoral
Saphenous
Popliteal
Tibial

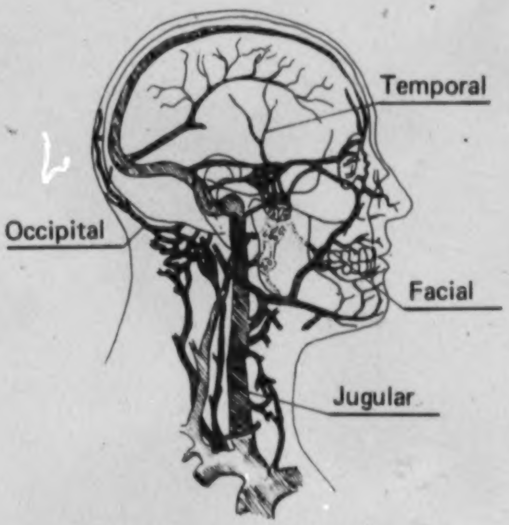
INFORMATION SHEET

IX. Vessels that supply blood to the head

(NOTE: The cerebral arteries and veins branch throughout the head to provide for circulation.)



ARTERIES



VEINS

Used with permission of W.B. Saunders Company from *Dorland's Illustrated Medical Dictionary*, 25th ed., copyright 1974.

X. Process of portal circulation (Transparency 8)

A. Veins from the stomach, intestine, spleen, and pancreas empty into one vessel, the portal vein

B. Portal vein then carries the blood, loaded with digested food, to the liver, which extracts food materials for storage and modification including removal of toxins

C. Blood leaves the liver through the hepatic veins which empty into the inferior vena cava

XI. Lymphatic system (Transparency 9)

(NOTE: Lymph nodes are found along the lymph system, and some body organs, such as the tonsils, adenoids, and spleen, are formed of lymph tissue.)

A. Network of very small lymph capillaries collects excess tissue fluid and certain waste products from the body cells

INFORMATION SHEET

B. Lymph fluid resembles plasma in composition, but contains less protein

C. Lymph drainage from the intestinal area may be milky in appearance due to the high fatty contents after a meal

D. Lymph capillaries empty into larger vessels and finally drain into the thoracic duct and the right lymphatic duct

E. Two main lymphatic channels empty into the veins at the base of the neck where the lymph mixes with the blood plasma

(NOTE: The flow of lymph is slow and is aided by muscular contractions and by valves which keep it from flowing backward.).

XII. Functions of the spleen

(NOTE: The spleen is the largest mass of lymphoid tissue that lies in the upper abdomen, behind the stomach. This organ can be removed, if necessary, without ill effect.)

A. Stores blood

B. Destroys old, red blood cells

C. Filters out dead blood cells and cancer cells

D. Destroys bacteria

E. Manufactures lymphocytes

F. Produces antibodies

XIII. Terms associated with vital signs

A. Pyrexia--Elevation of body temperature above normal

B. Febrile--Feverish; pertaining to a fever

C. Intermittent fever--One that alternates between fever and normal or subnormal body temperature

D. Remittent fever--One that rises several degrees above normal, then drops a little, but does not reach normal body temperature

E. Crisis--Sudden drop from pyrexia to normal body temperature

F. Lysis--Gradual return from pyrexia to normal body temperature

G. Hypothermia--Below normal body temperature

(NOTE: *Hypo* refers to less than or below.)

INFORMATION SHEET

H. Pulse--Beat of the heart as felt through the walls of the arteries

I. Arrhythmia--Uneven intervals between pulse or heartbeats

J. Apical pulse--Heart rate counted at the apex of the heart by using a stethoscope

K. Pulse deficit--Difference between pulse counts taken simultaneously at two sites, usually radial and apical pulses

L. Tachycardia--Heart rate consistently above normal

M. Bradycardia--Abnormally slow heart rate

N. Respiration--Breathing; the inspiration and expiration of air involving the muscles of the chest and abdomen

O. Body temperature--Balance between heat produced and heat lost by the body

P. Hypertension--High blood pressure

Q. Hypotension--Low blood pressure

R. Blood pressure--Force the blood exerts against a vessel wall as the heart beats

S. Systolic pressure--Pressure at its peak during the contraction or systole of the heart

T. Diastolic pressure--Pressure at its lowest when the heart is relaxed, the diastole of the heart

U. Korotkoff method--Distinct series of sounds heard in listening to the blood pressure, including systolic and diastolic

V. Pulse pressure--Difference between systolic and diastolic pressure

(NOTE: Normal values for the young adult are systolic, 120 mm Hg; diastolic, 80 mm Hg; and pulse pressure, approximately 40 mm Hg. Pulse pressure more than 50 or less than 30 mm Hg is considered abnormal.)

W. Electrocardiogram (EKG or ECG)--Record of electrical activity of the heart

XIV. Reasons why knowledge of vital signs is important

(NOTE: Vital signs including temperature, pulse, respirations, and blood pressure are known as cardinal symptoms.)

A. Change in one of the vital signs may affect the others

B. Deviation from the "normal" rates usually indicates presence of a disease or infection

INFORMATION SHEET

C. Variations of certain vital signs are so typical of some diseases or stages of diseases that diagnosis and medical care plan can be dependent upon these symptoms

D. Accurate measurement of the vital signs is an important aid in the evaluation of a patient's condition

(NOTE: Vital signs may be checked only once or twice a day; in cases of severe illness they are checked every four hours, or more often as ordered by physician or charge nurse.)

XV. Regulation of body temperature

(NOTE: Body temperature is regulated by the hypothalamus and the autonomic nervous system. The hypothalamus functions as a thermostat, and the autonomic nerves supply the circuit which regulates heat loss.)

A. Heat is produced by oxidation of digested food and by muscle and gland activity; some heat may be obtained from the environment

B. Heat is lost through respirations, excreta, cold beverages, and cold foods which are consumed; the greatest amount of heat loss is through the skin

(NOTE: The body functions most efficiently at normal temperature. When heat production and heat loss are in balance, the temperature is normal, 97.16°-99°F or 36°-38°C.)

XVI. Indications for specific temperature sites (Assignment Sheets #3, #4, and #5; Job Sheets #1, #2, #3, and #4)

A. Oral cavity

1. Patients with diarrhea
2. Patients with rectal distention from fecal material
3. Patients with rectal or perineal surgery

B. Rectal

1. Patients who have difficulty in breathing
2. Patients with oral or nasal surgery, infection, or disease
3. Patients with confusion, mental illness, senility, or patients who are unconscious
4. Patients with extreme weakness
5. Patients to whom oxygen is being administered

INFORMATION SHEET

XVII. Temperature ranges, conditions, and sites where taken

TEMPERATURE RANGES	CONDITION	SITES
97.6°-99°F (36.4°-37.2°C)	Normal	Oral
99.6°F (37.5°C)	Normal	Rectal
97.6°F (36.4°C)	Normal	Axillary

(NOTE: Rectal temperatures average one degree higher than oral temperatures; axillary temperatures average one degree lower than oral.)

XVIII. Factors that influence body temperature

A. External environment

Examples: Room temperature, ventilation, amount of clothing, humidity

B. Internal environment

Examples: Amount of adipose tissue, illness, fluid and electrolyte balance

C. Sex

D. Age

(NOTE: In infants and young children, the temperature is not stable because the heat-regulating mechanism is not fully developed and they have less body fat; in the aged, the heat-regulating mechanism becomes less efficient.)

E. Emotions

Examples: Excitement, anxiety, nervousness, and other emotions cause increased activity of the secreting glands, which increases heat production

F. Time of day

(NOTE: Body temperature is usually highest in mid-afternoon and lowest during the night.)

G. Exercise and digestive processes

(NOTE: Increased activity elevates body temperature.)

H. Infection or disease

(NOTE: Infection and disease processes may increase or decrease body temperature.)

INFORMATION SHEET

I. Hot or cold foods

(NOTE: Hot or cold foods taken within 15-30 minutes prior to taking an oral temperature will cause an inaccurate reading.)

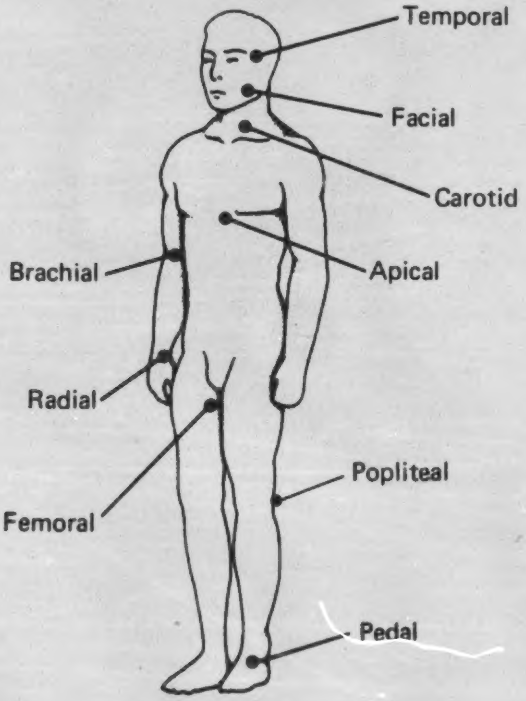
J. Mouth breathing

(NOTE: The dry, cooled mouth of a mouth-breathing person will not register an accurate temperature.)

K. Smoking

(NOTE: Smoking prior to taking an oral temperature reading will give an inaccurate reading.)

XIX. Sites where pulse may be taken (Job Sheets #5 and #6)


Temporal
Facial
Carotid
Brachial
Apical
Radial
Popliteal
Femoral
Pedal

INFORMATION SHEET

XX. Average pulse rates and their specific groups

A. Men--60-70 beats per minute

B. Women--72-80 beats per minute

C. Children over age seven--72-90 beats per minute

D. Children age one to seven--80-120 beats per minute

E. Infants--110-130 beats per minute

XXI. Criteria used when assessing pulse and respiration rates

(NOTE: It is very important when assessing pulse rates to consider the following criteria. Practice until you can pick up any abnormalities and state the information in a precise manner.)

A. Rate--Number of pulse, heartbeats, or respirations per minute

(NOTE: Make sure that you are counting the full pulse or respirations for a full minute.)

B. Rhythm--Regularity or irregularity of the pulse, heartbeat, or respirations

Examples: Pulse skipping a beat, accelerated beats, slow respirations, hyperventilation (fast, shallow respirations)

C. Quality--Volume; strength of pulse beats

Examples: Full, strong, weak, thready, bounding

XXII. Factors that influence heart and pulse rate

A. Activity

B. Emotions

C. Some drugs

(NOTE: Caffeine increases heart rate and digitalis decreases heart rate.)

D. Smoking

E. Endocrine disturbances

(NOTE: Hyperthyroidism and hypothyroidism influence heart rate.)

F. Elevated temperature

(NOTE: Heart rate usually increases proportionally as temperature increases.)

G. Disorders of the heart and circulatory system

INFORMATION SHEET

XXIII. Factors that affect respiration (Job Sheet #5)

A. Age

(NOTE: Respiration rate for newborns may be 40 per minute while the normal adult rate is 14-18 per minute.)

B. Sex

C. Exercise

D. Pain

E. Fever

F. Emotions

G. Heart disease

H. Respiratory disease

I. Drugs

XXIV. Terms to describe respiration

A. Eupnea--Normal breathing

B. Dyspnea--Difficult or labored breathing

C. Apnea--Temporary cessation of breathing

D. Orthopnea--Breathing possible only when person sits or stands in an erect position

E. Cheyne-Stokes--Uneven respirations from strong to weak with intervals of apnea

F. Rales--Bubbling or rattling sounds caused by mucus in the air passages as in bronchitis or pneumonia

G. Costal--Breathing accomplished chiefly by rib muscles

H. Kusshmaul--Very deep, gasping type of respiration associated with diabetic coma

XXV. Factors affecting blood pressure

A. Condition of the artery and arteriole walls

(NOTE: Blood pressure usually increases with age.)

B. Rate of heartbeat

C. Exercise

INFORMATION SHEET

D. Emotions

E. Sex

F. Hemorrhage

G. Shock

H. Drugs

I. Endocrine activity

J. Altitude

K. Smoking

L. Site where taken

XXVI. Sites for taking blood pressure (Job Sheet #7)

(NOTE: When blood pressure is not taken in the arm, the site should be recorded on patient's chart.)

Brachial artery
Popliteal artery
Tibial artery

INFORMATION SHEET

XXVII. Criteria to observe when assessing vital signs (Assignment Sheet #2)

(NOTE: Taking and recording vital signs is not enough. Interpreting these signs and making assessments according to their comparisons with the norms for the particular patient is imperative.)

A. Begin with a systematic approach

(NOTE: Taking vital signs once is not enough. Begin by looking at the patient's vital signs when admitted and at the admitting or primary diagnosis. Be consistent in how you take the vital signs and when you take them.)

B. Take vital signs as often as necessary

(NOTE: A physician's order is not necessary. If you see changes in a patient's vital signs, keep monitoring them until you have a clear picture of what is happening to the patient.)

C. Interpret and analyze the vital signs to see if they have a relationship to changes in patient's condition, laboratory results, or changes in symptoms

(NOTE: If the patient's pulse increases, check the blood pressure. If you check the patient's new blood count and see an elevated white count, check to see if the patient's temperature has changed.)

D. Vital signs should be taken by the person caring for the patient for the entire shift

(NOTE: Many hospitals have one person taking vital signs on all patients as part of his or her responsibilities. This person cannot compare any vital signs and does not know the patient as well as the person who gives one-to-one care.)

XXVIII. Terms associated with application of heat and cold

A. Suppuration--Formation or discharge of pus

B. Metabolic disease--Disease caused by a defect in the chemical processes of the body cells

C. Necrosis--Death of a cell or group of cells

D. Hypothermia treatment--Deliberate reduction of temperature in all or part of the body

E. Ultraviolet rays--Invisible rays produced by the sun or with special equipment which cause tanning of the skin, kill bacteria, and aid in metabolism of vitamin D

F. Infrared rays--Rays produced by the sun which provide heat; can be produced with special equipment

INFORMATION SHEET

G. Compress--Cloth, wet or dry, folded and applied firmly to a part of the body

H. Inhalation--Introduction of dry or moist air or vapor into the lungs for therapeutic purposes

I. Systemic--Pertaining to the whole body rather than one of its parts

J. Frostbite--Freezing or the effect of freezing a part of the body

K. Congestion--Abnormal accumulation of blood in a body part

XXIX. Local effects of heat and cold

A. Heat

1. Dilation of blood vessels in area causing increase in blood supply

   (NOTE: This provides more nutrients and oxygen to the tissues and increases removal of toxins and excess tissue fluids.)

2. Increase or decrease in swelling, depending upon etiology and stage of diseases or injury

3. Reduction of pain

4. Increase in suppuration

B. Cold

1. Constriction of blood vessels in area causing decrease in blood supply to part

2. Prevention of or decrease of swelling

3. Lessening of bleeding

4. Decrease in suppuration

5. Reduction of sensation and lessening of pain with prolonged exposure

6. Cooling of the part and eventually the body

7. Decrease in inflammation

XXX. Systemic effects of heat and cold

A. Heat

1. Decrease in available blood supply to other parts of the body which may result in weakness, dizziness, or fainting

INFORMATION SHEET

2. Drowsiness
3. Sense of well-being due to relief of pain

B. Cold

1. Slowing of metabolism from prolonged application
2. Decrease in tissue stress as a result of trauma
3. Reduction of blood loss

XXXI. Forms of heat (Job Sheets #8, #9, #10, #11, #12, #13, and #14)

A. Dry heat

1. Hot water bottle

   (NOTE: This is a flat, rubber bag with removable stopper or other type of closure.)

2. Electric pad

   (NOTE: This is a covered network of wires which radiates heat when an electrical current is passed through it.)

   (**CAUTION**: Heating pads can be very dangerous if used improperly. Many hospitals have discontinued their use.)

3. Chemical hot pack

   (NOTE: This is a prefilled package containing interracting ingredients, which, when combined by squeezing, produce sustained heat.)

4. Circulating aqua pad/K-pad

   (NOTE: This is a pad through which warm water is circulated by an electric motor.)

5. Heat lamp

   (NOTE: This is a lamp with a regular light bulb to provide external heat.)

6. Heat cradle

   (NOTE: This is a cradle equipped with light bulbs to provide heat.)

7. Infrared and ultraviolet lamps

   (NOTE: These are lamps with special bulbs to provide rays for specific treatments.)

INFORMATION SHEET

B. Moist heat

1. Warm, moist packs or compresses

   (NOTE: These are pieces of material from which hot water is wrung before applying to affected areas.)

2. Sitz bath

XXXII. Forms of cold (Job Sheets #15, #16, #17, and #18)

A. Dry cold

1. Ice bag

   (NOTE: This is a flat bag filled with ice.)

2. Ice collar

   (NOTE: This is a narrow, rubber bag filled with ice and is usually used around the neck.)

3. Circulating aqua pad/K-pad

   (NOTE: This is a pad through which cold water flows continuously.)

4. Chemical cold pack

   (NOTE: This is a prefilled package containing interreacting ingredients which are combined by squeezing to produce sustained cold. There are several forms of warm packs and cold packs available. Some are used once and discarded; others are cleaned and used again. Their preparation and use may vary, so the nurse should check instructions for using the equipment.)

B. Moist cold

1. Cold moist packs or compresses

   (NOTE: These are small gauze pads, cotton covered with gauze, or a washcloth from which ice water is wrung before applying.)

2. Cool or tepid sponge bath

   (NOTE: This is a sponge bath using alcohol, cool or tepid water, or a combination of alcohol and water. In some institutions a physician's order may be needed to use alcohol.)

   (**CAUTION**: Some patients may react unfavorably to cool baths; others may be unable to tolerate them. Cool baths should not be used for patients with arteriosclerosis, arthritis, lowered resistance, or for very young children. The initial effect of cold on the body may produce unfavorable reactions. If patient has a weak, rapid pulse, cyanosis, or chills, the bath should be discontinued and moderate heat applied.)

INFORMATION SHEET

3. Cool vapor inhalations

   (NOTE: This treatment involves water, cooled to provide cool mist to the respiratory system.)

XXXIII. Temperature ranges used for applications of heat and cold

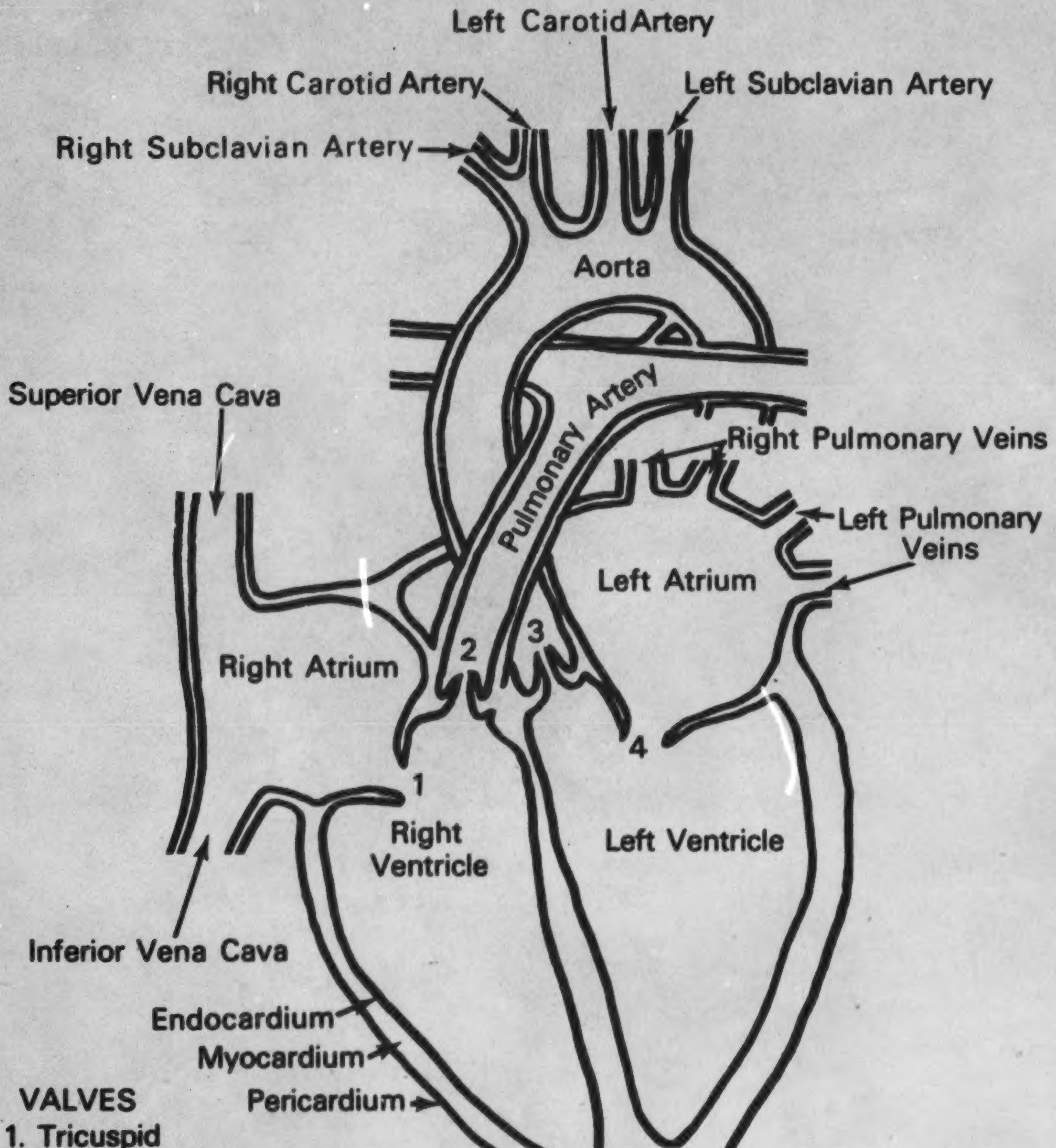
A. Heat

1. Warm or neutral--93°-98°F (34°-37°C)
2. Hot--98°-105°F (36.6°-41°C)
3. Very hot--105°-115°F (41°-46°C)

B. Cold

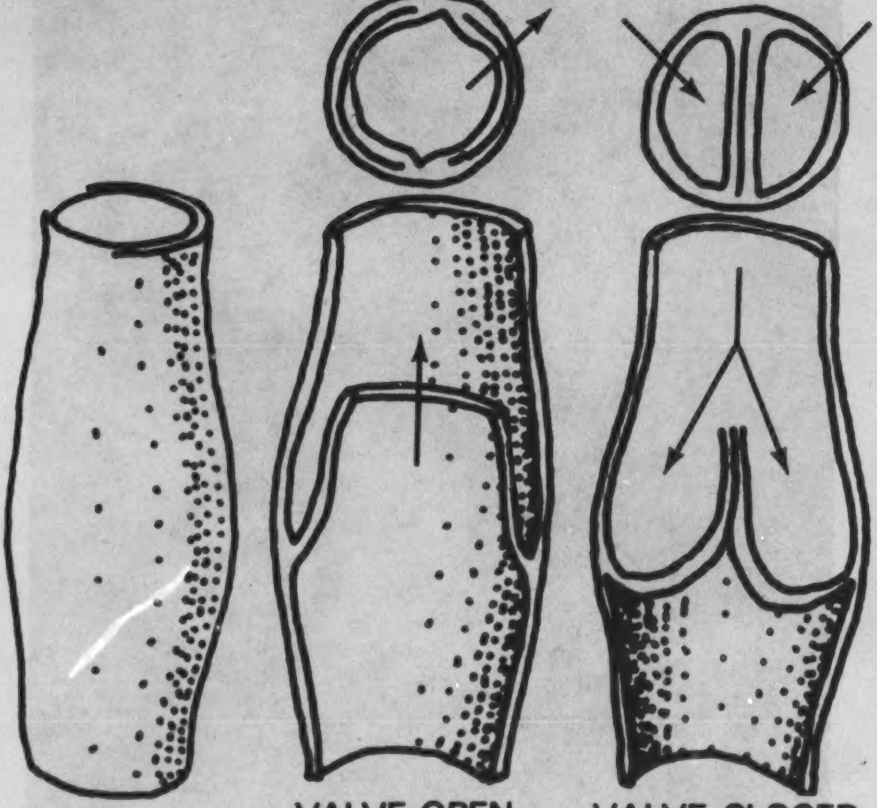
1. Tepid--80°-93°F (28°-34°C)
2. Cool--65°-80°F (18.3°-27.5°C)
3. Cold--50°-65°F (10°-18.3°C)
4. Very cold--Below 50°F (10°C)

Structure of the Heart


Left Carotid Artery
Right Carotid Artery
Left Subclavian Artery
Right Subclavian Artery
Aorta
Superior Vena Cava
Pulmonary Artery
Right Pulmonary Veins
Left Pulmonary Veins
Left Atrium
Right Atrium
2
3
4
1
Right Ventricle
Left Ventricle
Inferior Vena Cava
Endocardium
Myocardium
Pericardium

VALVES
1. Tricuspid
2. Pulmonary Semilunar
3. Aortic Semilunar
4. Bicuspid or Mitral

Bicuspid Valves

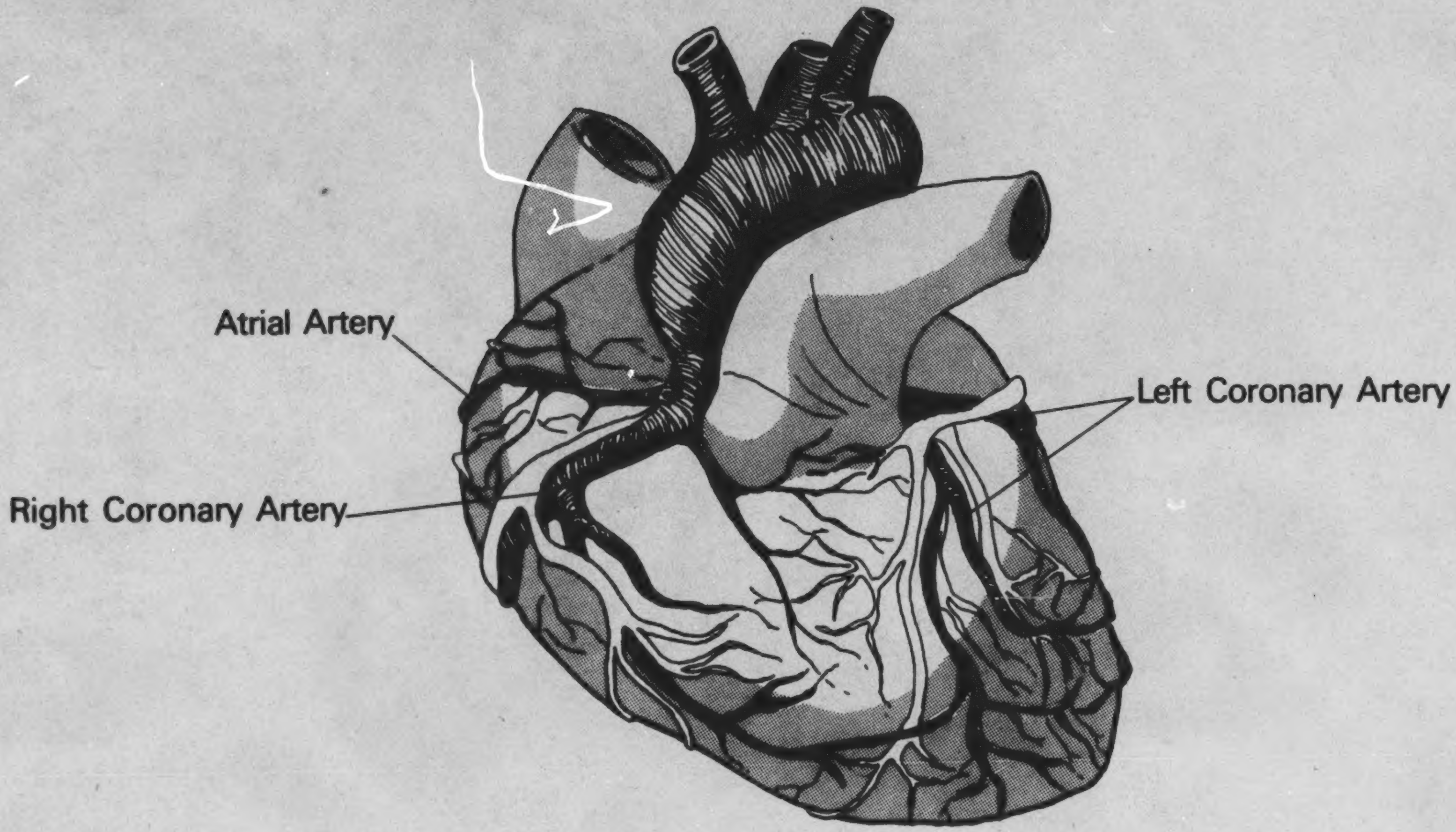


VALVE OPEN
Lateral View

VALVE CLOSED
Medial View

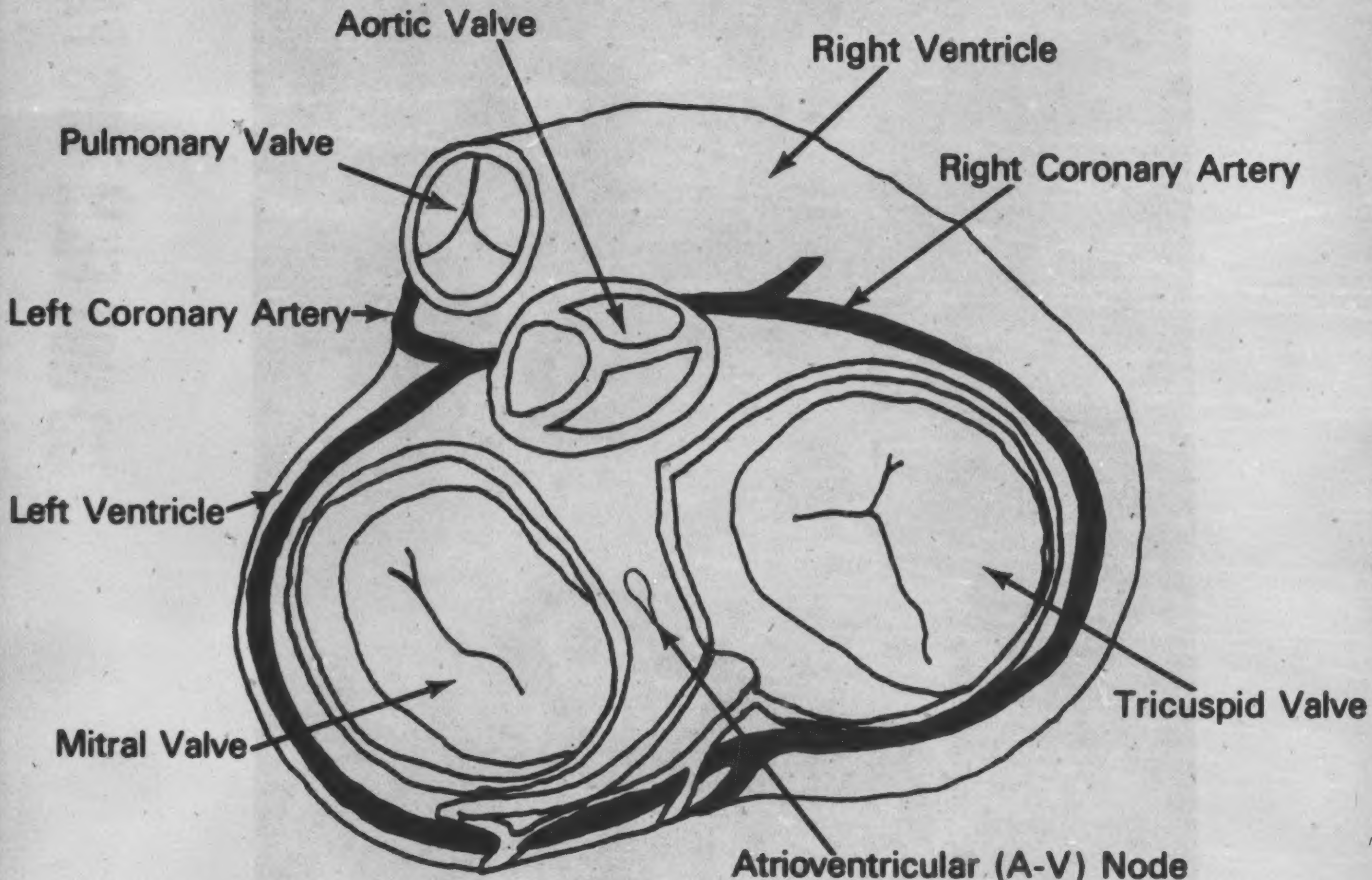
Veins contain bicuspid valves which open in the direction of the blood flow, but prevent backward flow when pockets become filled.

Blood Supply to the Heart


Atrial Artery
Left Coronary Artery
Right Coronary Artery

(Coronary arteries surround the heart)

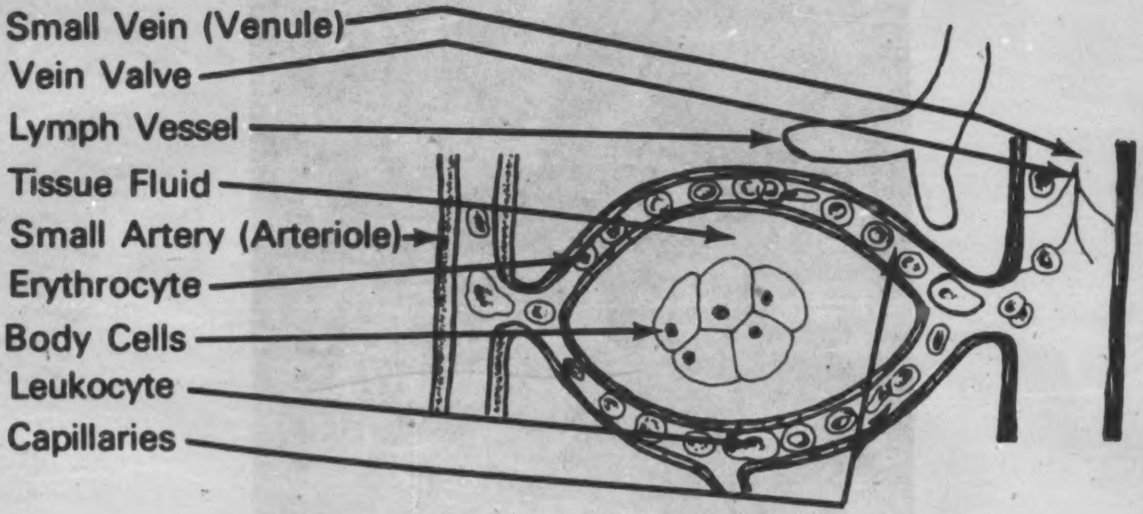
Coronary Arteries

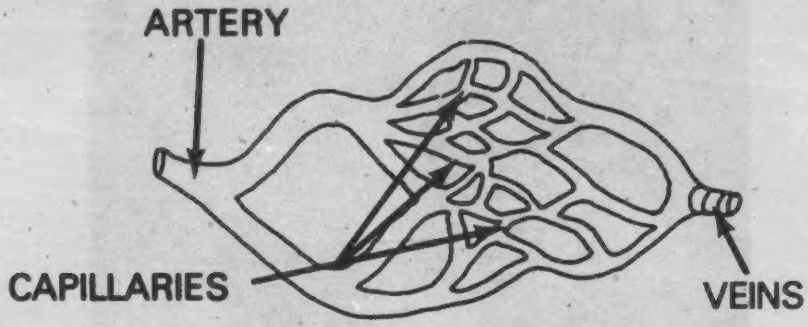

Aortic Valve
Right Ventricle
Pulmonary Valve
Right Coronary Artery
Left Coronary Artery
Left Ventricle
Mitral Valve
Tricuspid Valve
Atrioventricular (A-V) Node

TOP VIEW OF HEART

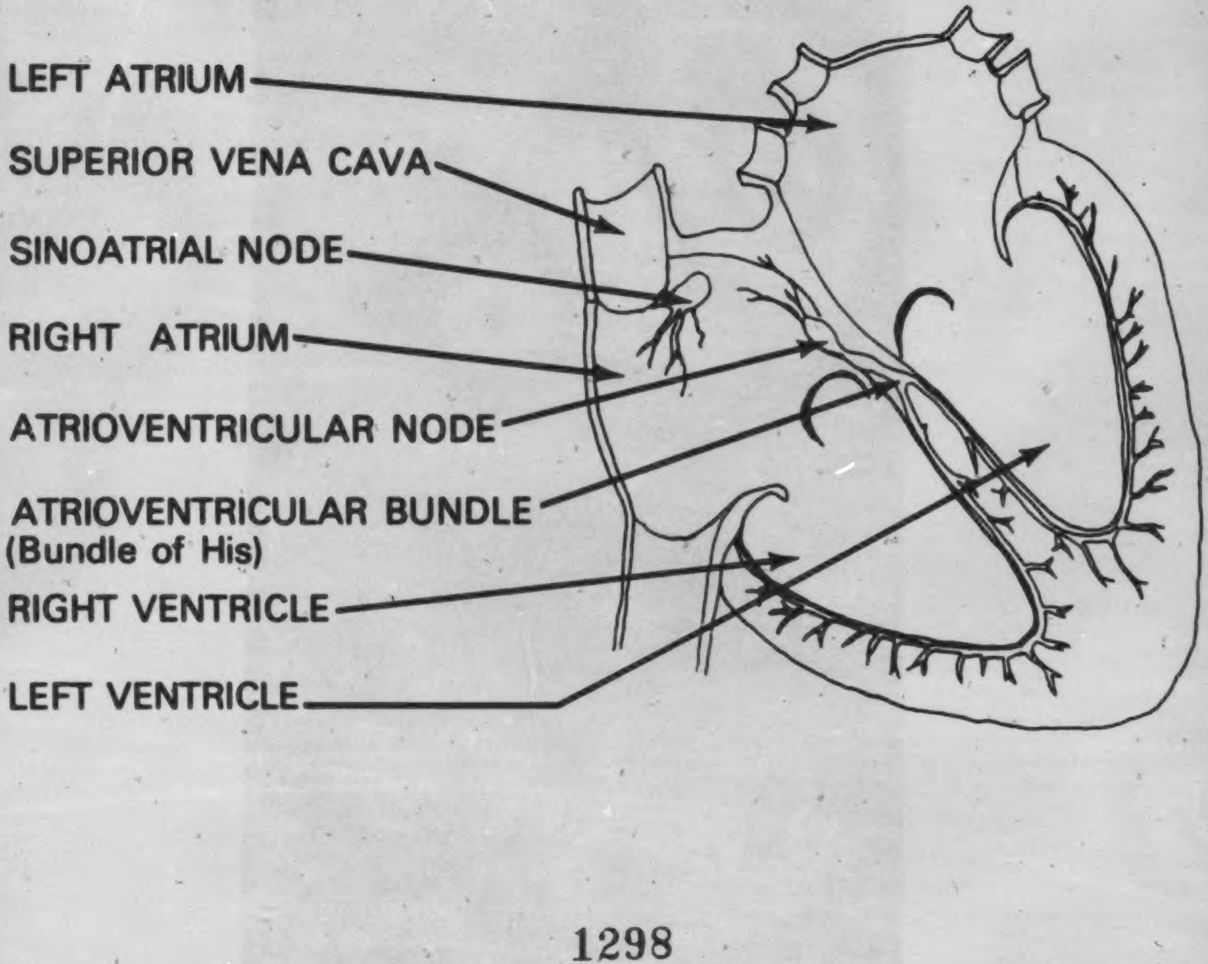
1296

Capillary Function

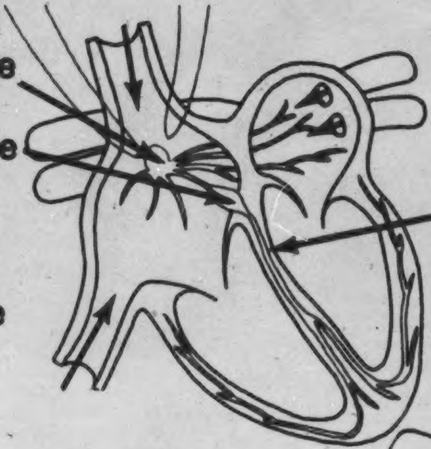

Small Vein (Venule)
Vein Valve
Lymph Vessel
Tissue Fluid
Small Artery (Arteriole)
Erythrocyte
Body Cells
Leukocyte
Capillaries


ARTERY
CAPILLARIES
VEINS

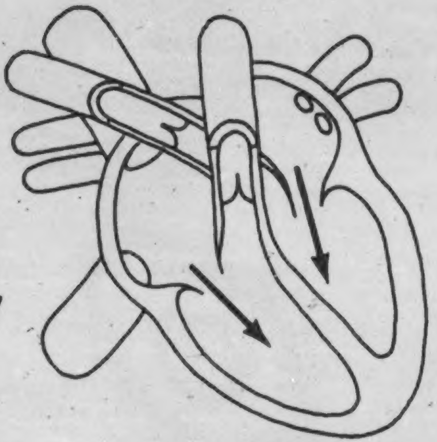
Conduction System of the Heart


LEFT ATRIUM
SUPERIOR VENA CAVA
SINOATRIAL NODE
RIGHT ATRIUM
ATRIOVENTRICULAR NODE
ATRIOVENTRICULAR BUNDLE (Bundle of His)
RIGHT VENTRICLE
LEFT VENTRICLE

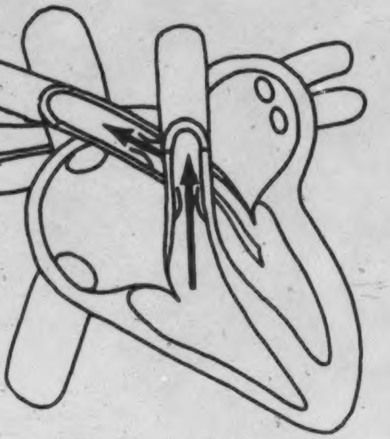
The Heart Pumping Cycle



1. Blood fills both Atria, stimulating impulse in SA node - Diastole

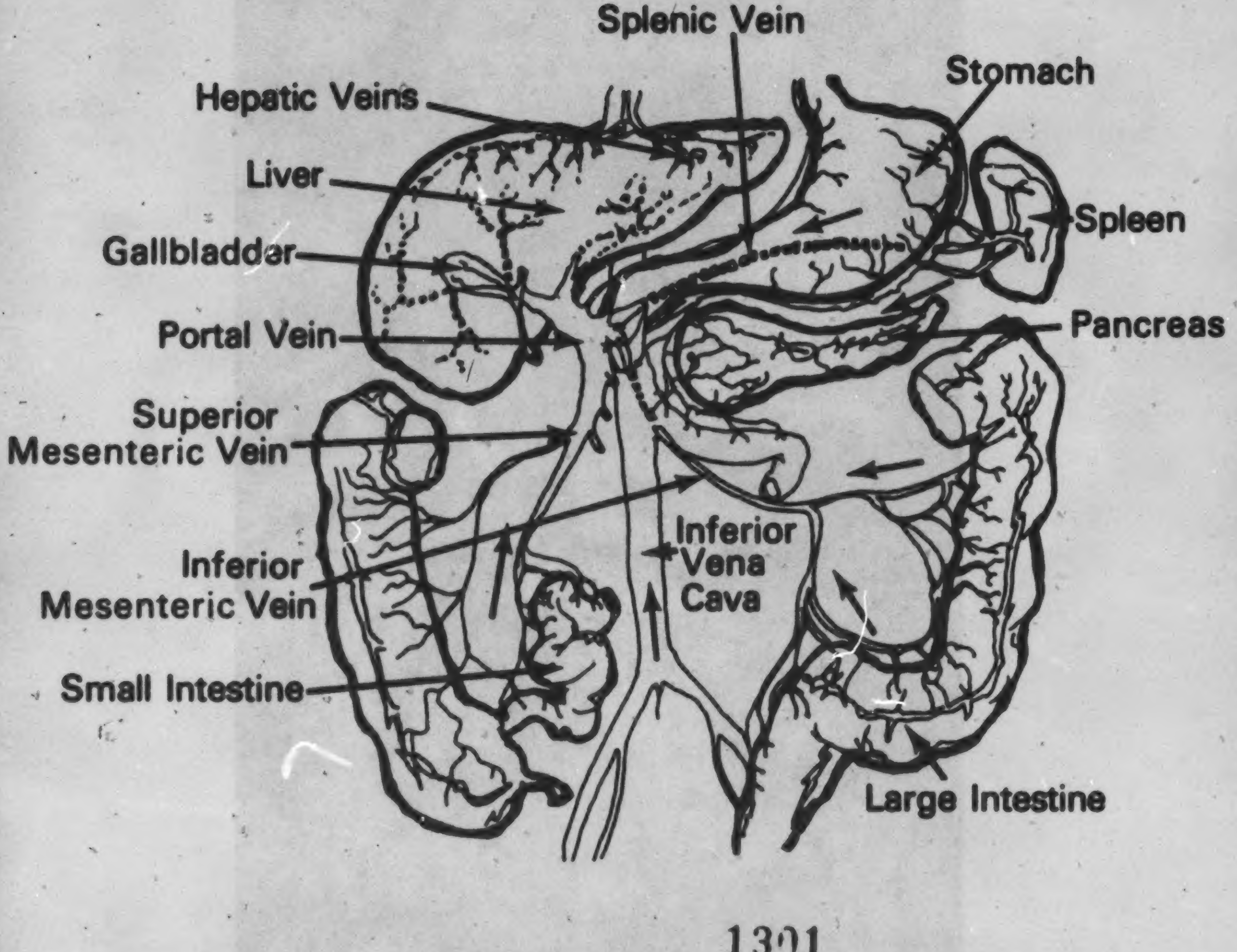


2. Atria contract, squeezing blood into Ventricles. AV node is stimulated, transmitting impulse to Bundle of His

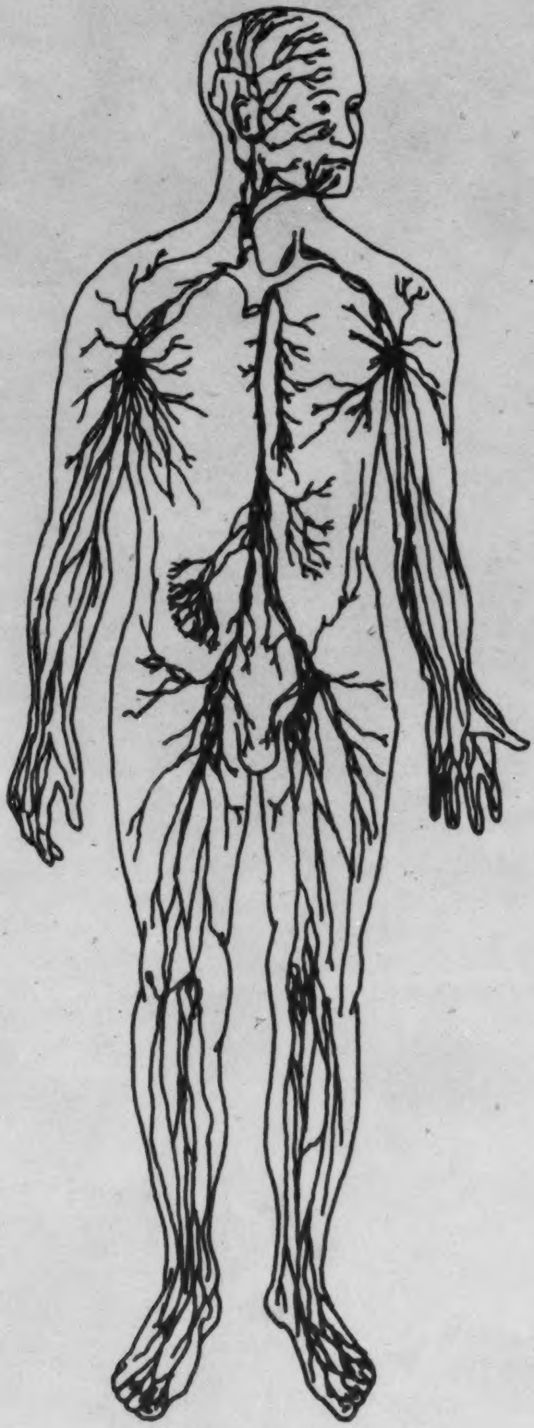


3. Ventricles contract, squeezing blood into Aorta and Pulmonary Arteries - Systole

The Portal Circulation


Splenic Vein
Stomach
Hepatic Veins
Liver
Spleen
Gallbladder
Portal Vein
Pancreas
Superior Mesenteric Vein
Inferior Vena Cava
Inferior Mesenteric Vein
Small Intestine
Large Intestine

The Lymphatic System

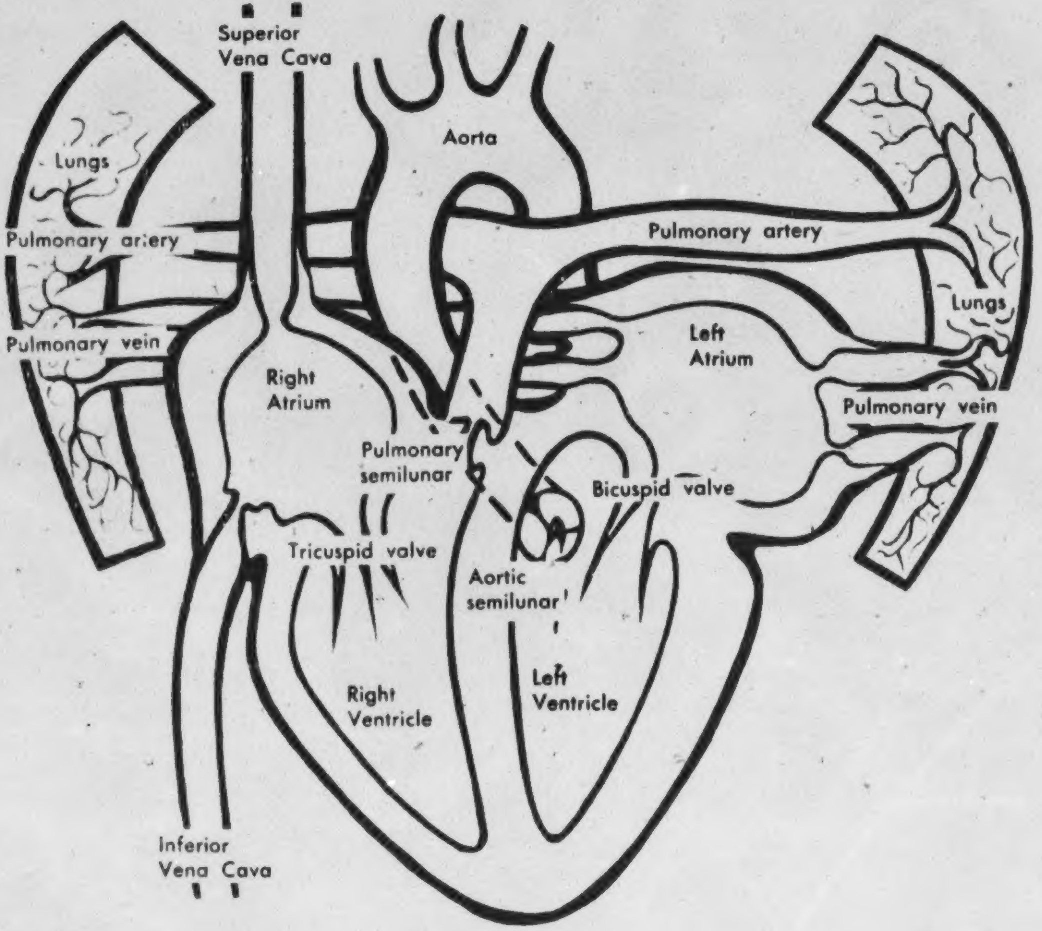


CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

ASSIGNMENT SHEET #1--TRACE A DROP OF BLOOD THROUGH THE HEART

NAME ______________________________ SCORE ______________

Using the diagram below, trace a drop of blood through the heart. Use blue arrows to indicate the deoxygenated blood and red arrows to indicate the oxygenated blood. Start the drop of blood at the point given to you by your instructor. Hand in to instructor for evaluation.


Superior Vena Cava
Aorta
Lungs
Pulmonary artery
Pulmonary artery
Lungs
Pulmonary vein
Left Atrium
Right Atrium
Pulmonary vein
Pulmonary semilunar
Bicuspid valve
Tricuspid valve
Aortic semilunar
Right Ventricle
Left Ventricle
Inferior Vena Cava

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CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

ASSIGNMENT SHEET #2--ASSESS VITAL SIGNS

NAME ______________________________ SCORE __________

It is important to look at all vital signs and attempt to correlate them to what is happening in the patient's life. It is not enough to take the temperature, pulse, respiration, and blood pressure and write them down. By evaluating each vital sign separately, then together, it may be possible to pick up changes in the patient's condition and catch a symptom before it becomes a major problem. Full documentation should take place after vital signs are assessed. Practice on a classmate first, taking a full set of vital signs, and document your findings using the blanks below. When you feel comfortable in taking and documenting vital signs, assess two patients that you or your instructor have chosen. Take into consideration all factors present when making your patient assessments, such as diagnosis, past medical history, age, sex.

TEMPERATURE

1. Temperature ________________

   Taken: Oral _____ Axillary _____ Rectal _____

2. If elevated, any other symptoms? ______________________________

   ____

   ____

PULSE

1. Pulse rate ________________

   Taken: Radial _____ Apical _____

2. Rhythm ____

   ____

3. Quality ____

   ____

(NOTE: Take pulse on both sides if taken radially, and note whether they are the same.)

RESPIRATION

1. Respiration rate ________________

2. Rhythm ____

   ____

ASSIGNMENT SHEET #2

3. Quality ____________________

4. Medications patient is taking that affect the respirations: ____________________

5. Activities that alter the respirations: ____________________

   Examples: Sitting up makes breathing easier for patient, bending over or walking makes breathing difficult for patient

6. Other symptoms that indicate respiratory problems: ____________________

   Examples: Skin color, noises made when breathing

BLOOD PRESSURE

1. Blood pressure readings: _______ / _______
2. Rhythm: ____________________
3. Quality: ____________________
4. Pulse deficit: ____________________
5. Medications patient is taking that affect the blood pressure: ____________________
6. Other symptoms indicating high or low blood pressure: ____________________

   Examples: Dizziness, weakness

PN I - 1009-C

ASSIGNMENT SHEET #2

VITAL SIGNS ASSESSMENT

(NOTE: If information does not apply to your patient, place N/A for non-applicable in the blank.)

Patient's initials:______________ Age:_____ Sex:_____

Primary or admitting diagnosis:______________________________

____

Admission date:__________ Admitting vital signs: T_____ P_____ R_____ P/P_____

Surgery: ______________ Date:______________

Time vital signs (VS) taken:______________

Temperature

1. Temperature:______________ How taken?______________

   Why was this route taken?______________________________

2. If elevated, any other symptoms?______________________________

   ____

   Example: Warm or hot to touch, elevated white count, excessive thirst

3. Laboratory work or procedures that might elevate or lower temperature or indicate why temperature was abnormal:______________________________

   ____

4. Is patient on any antipyretic drugs? Yes_____ No_____ If so, which drugs?__________

   ______________________________ How often?______________

Pulse

1. Pulse rate:__________

   Where taken:______________________________

   ____

2. Rhythm: ______________________________

   ____

3. Quality: ______________________________

   ____

ASSIGNMENT SHEET #2

4. Medications patient is taking that affect the pulse: ____________________

____

Respiration

1. Respiration rate: ____________
2. Rhythm: ____________________________________
3. Quality: ____________________________________

____

4. Medications patient is taking that affect the respirations: ____________

____

5. Activities that alter the respirations: ____________________

____

Examples: Sitting up makes breathing easier for patient, bending over or walking makes breathing difficult for patient

6. Other symptoms that indicate respiratory problems: ____________

____

Examples: Skin color, noises made when breathing

Blood Pressure

1. Blood pressure readings: ______ / ______
2. Rhythm: ____________________________________

____

3. Quality: ____________________________________

____

4. Pulse deficit: ____________________
5. Medications patient is taking that affect the blood pressure: ____________

____

6. Other symptoms indicating high or low blood pressure: ____________

____

Examples: Dizziness, weakness

ASSIGNMENT SHEET #2

VITAL SIGNS ASSESSMENT

(NOTE: If information does not apply to your patient, place N/A for non-applicable in the blank.)

Patient's initials:____________________ Age:_____ Sex:_____

Primary or admitting diagnosis:______________________________________

____

Admission date:__________ Admitting vital signs: T_____ P_____ R_____ P/P_____

Surgery: ______________ Date:______________

Time vital signs (VS) taken:____________________

Temperature

1. Temperature:______________ How taken?______________

   Why was this route taken?______________________________

2. If elevated, any other symptoms?______________________________

   ____

   Example: Warm or hot to touch, elevated white count, excessive thirst

3. Laboratory work or procedures that might elevate or lower temperature or indicate why temperature was abnormal:______________________________

   ____

4. Is patient on any antipyretic drugs? Yes_____ No_____ If so, which drugs?_________

   ______________________________How often?______________

Pulse

1. Pulse rate:________

   Where taken:______________________________________

   ____

2. Rhythm: ____

   ____

3. Quality: ____

   ____

ASSIGNMENT SHEET #2

4. Medications patient is taking that affect the pulse: ____________________

____

Respiration

1. Respiration rate: ______________
2. Rhythm: ____________________________________
3. Quality: ____________________________________

   ____
4. Medications patient is taking that affect the respirations: ________________

   ____
5. Activities that alter the respirations: ____________________

   ____

   Examples: Sitting up makes breathing easier for patient, bending over or walking makes breathing difficult for patient
6. Other symptoms that indicate respiratory problems: ________________

   ____

   Examples: Skin color, noises made when breathing

Blood Pressure

1. Blood pressure readings: ________ / ________
2. Rhythm: ____________________________________

   ____
3. Quality: ____________________________________

   ____
4. Pulse deficit: ______________________
5. Medications patient is taking that affect the blood pressure: ________________

   ____
6. Other symptoms indicating high or low blood pressure: ________________

   ____

   Examples: Dizziness, weakness

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

ASSIGNMENT SHEET #3--READ FAHRENHEIT AND CELSIUS THERMOMETERS

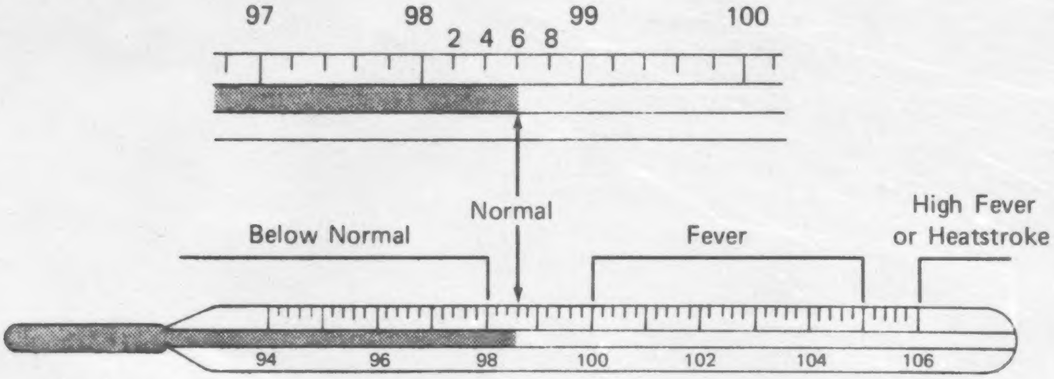
NAME ______________________________ SCORE __________

The clinical thermometer measures body temperature to the nearest two-tenths of a degree.

PART I--Reading Fahrenheit thermometers

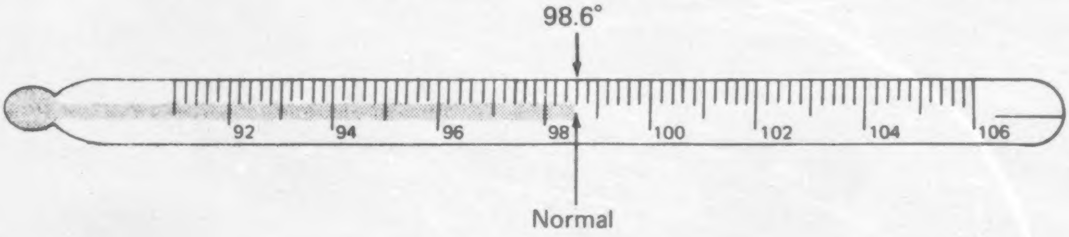
A. Hold thermometer at eye level. Rotate thermometer until you can clearly see column of mercury

B. Observe markings called calibrations on the scale which is at upper side of the column of mercury. Remember that each of the long lines represents a full degree and the four short lines represent two-tenths of a degree. Only even-numbered degrees are named on a Fahrenheit clinical thermometer, that is 96°, 98°, 100°, and so on


97
98
99
100
2 4 6 8
Normal
Below Normal
Fever
High Fever
or Heatstroke
94
96
98
100
102
104
106

C. If mercury column ends at one of the short lines, look to see which long line is immediately left. That will tell you the degree of temperature, for example 98°F mark, the temperature is 98.6°F. Temperature may also be written 98^{6}

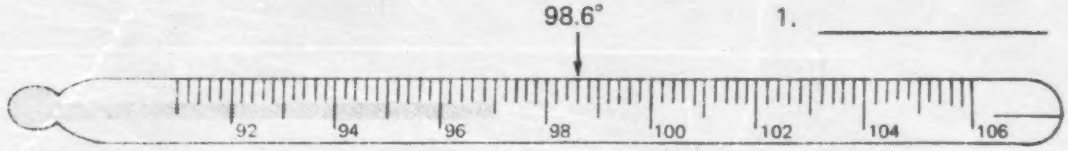
Fahrenheit


98.6°
92
94
96
98
100
102
104
106
Normal

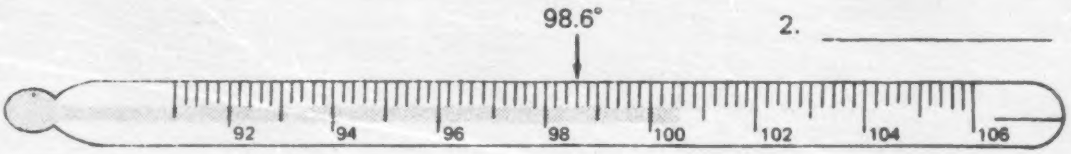
ASSIGNMENT SHEET #3

D. Write these thermometer readings in the blanks to the right.

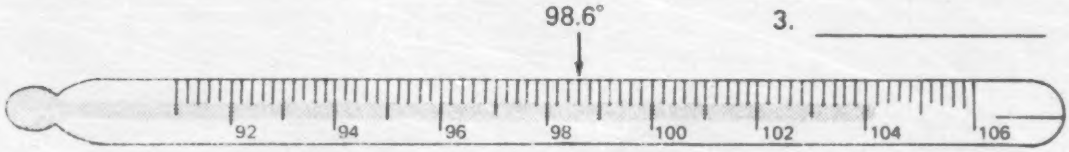
1. ____________


98.6°
92
94
96
98
100
102
104
106

2. ____________

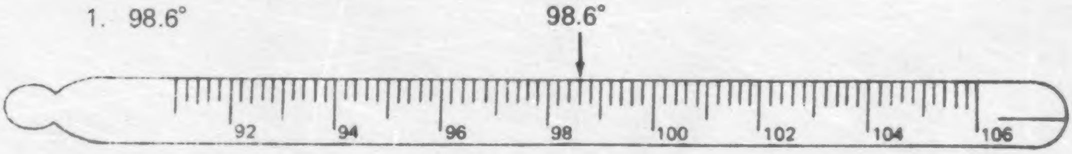

98.6°
92
94
96
98
100
102
104
106

3. ____________

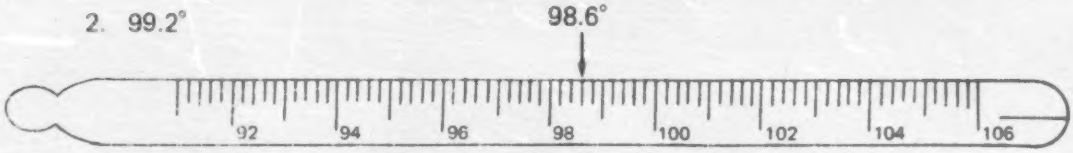

98.6°
92
94
96
98
100
102
104
106

E. Mark the temperature reading on the thermometers below.

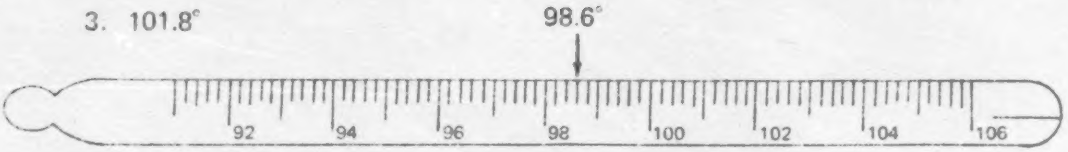
1. 98.6°


98.6°
92
94
96
98
100
102
104
106

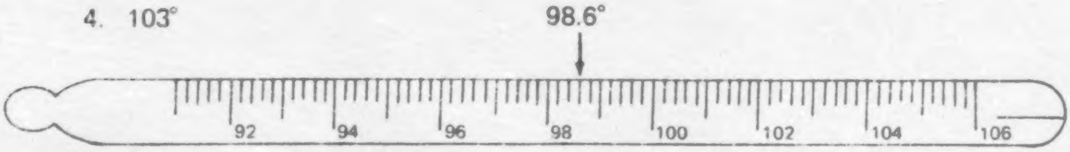
2. 99.2°


98.6°
92
94
96
98
100
102
104
106

3. 101.8°


98.6°
92
94
96
98
100
102
104
106

4. 103°

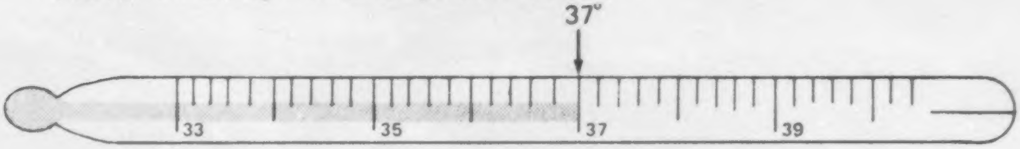

98.6°
92
94
96
98
100
102
104
106

ASSIGNMENT SHEET #3

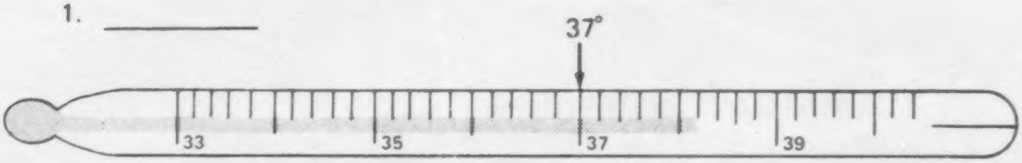
PART II--Reading Celsius thermometers

A. Observe calibrations on the Celsius thermometer. Remember that each of the long lines represents a full degree and each short line represents two-tenths of a degree. Only odd-numbered degrees are indicated by number on the Celsius clinical thermometer. Mark the temperature readings of the thermometers below in the blanks.

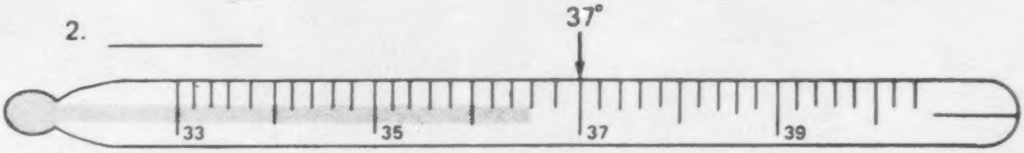
(NOTE: The average normal temperature is 37°C.)


37°
33
35
37
39

1. ___________

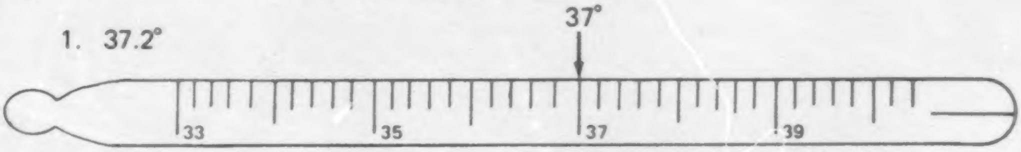

37°
33
35
37
39

2. ___________

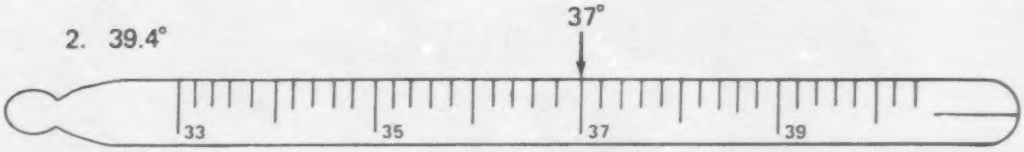

37°
33
35
37
39

B. Mark the temperature readings on these thermometers.

1. 37.2°

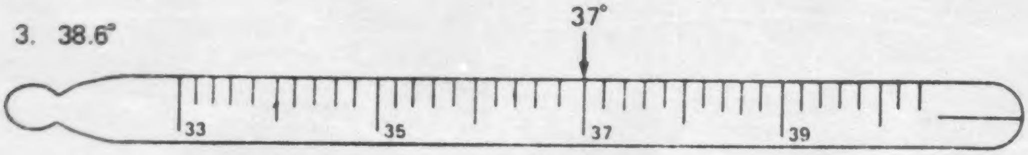

37°
33
35
37
39

2. 39.4°


37°
33
35
37
39

ASSIGNMENT SHEET #3

3. 38.6°


37°
33
35
37
39

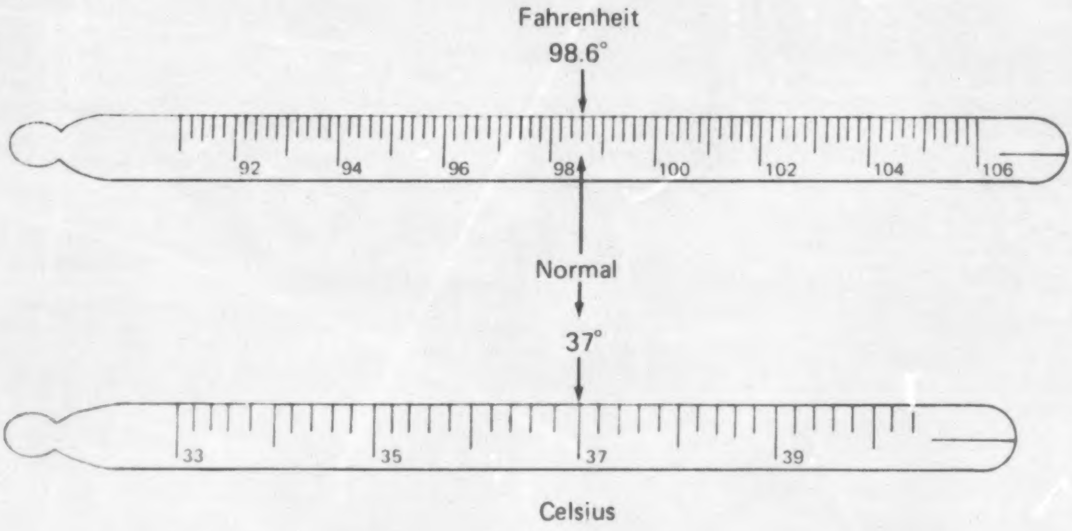
CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

ASSIGNMENT SHEET #4--CONVERT FAHRENHEIT AND CELSIUS READINGS

NAME ____ SCORE ____________

One thermometer is marked with either of two scales of measurement, Fahrenheit (F) or Celsius (C). Fahrenheit is more commonly used today, but the use of Celsius thermometers is becoming more common.

1. In order to convert Fahrenheit readings to Celsius, subtract 32 from the reading and multiply by 5/9; thus, $C^\circ = 5/9(F^\circ - 32)$
2. To convert Celsius to Fahrenheit, multiply the Celsius reading by 9/5 and add 32; thus, $F^\circ = (C^\circ \times 9/5) + 32$



3. Solve the following problems. Use the back of this page for your figuring.

a. 99.2°F = ____________________ °C

b. 102°F = ____________________ °C

c. 97°F = ____________________ °C

d. 39.4°C = ____________________ °F

e. 38°C = ____________________ °F

f. 37°C = ____________________ °F

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

ASSIGNMENT SHEET #5--CHART TEMPERATURE, PULSE, RESPIRATIONS, AND BLOOD PRESSURE

NAME ______________________________ SCORE __________

Accurate measurement and recording of vital signs is an important aid in the evaluation of a patient's condition. Vital signs may be checked only once or twice a day but in cases of severe illness or post-operative conditions, they will be checked more often as ordered by the physician or charge nurse.

Record the following TPRs and BPs on a graphic sheet provided by your instructor and hand in for evaluation.

8 a.m.	99.2 - 84 - 20	120/80
Noon	100.4 - 88 - 22	126/82
4 p.m.	102.6 - 102 - 28	132/86
8 p.m.	104.2^{R} - 128 - 32	140/98
10 p.m.	105^{R} - 136 - 38	
Midnight	103.8 - 130 - 36	144/100
2 a.m.	103 - 126 - 34	
4 a.m.	101.4 - 120 - 30	138/92
8 a.m.	99 - 92 - 24	128/88

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

ANSWERS TO ASSIGNMENT SHEETS

Assignment Sheet #3

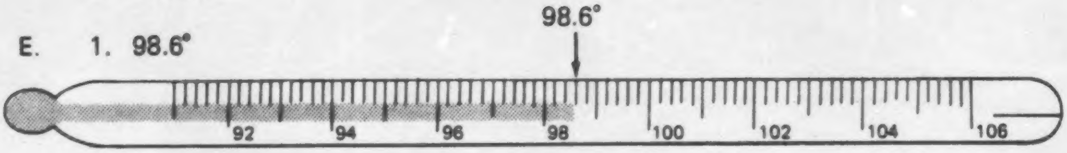
PART I

D. 1. 97°F

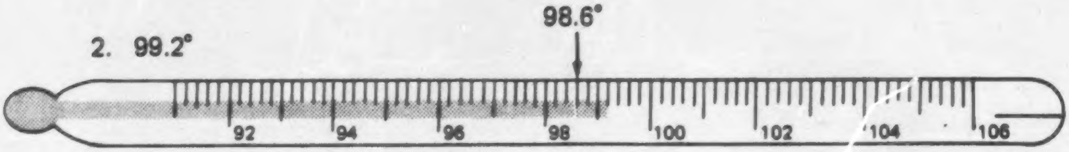
2. 100.6°F

3. 104.2°F

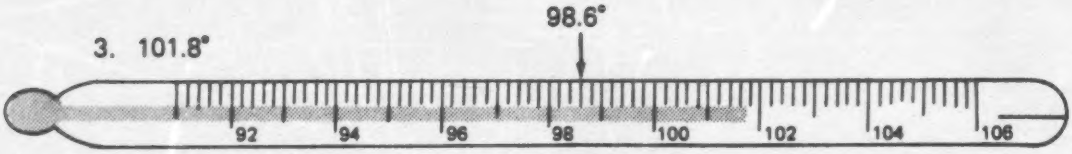
E. 1. 98.6°


98.6°
92
94
96
98
100
102
104
106

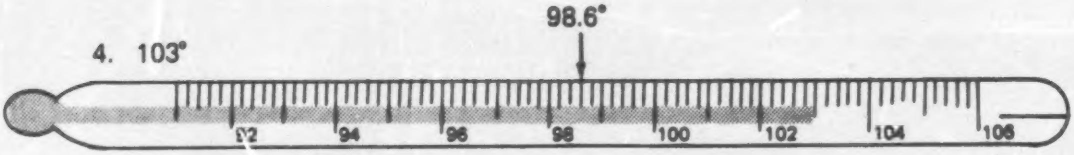
2. 99.2°


98.6°
92
94
96
98
100
102
104
106

3. 101.8°


98.6°
92
94
96
98
100
102
104
106

4. 103°

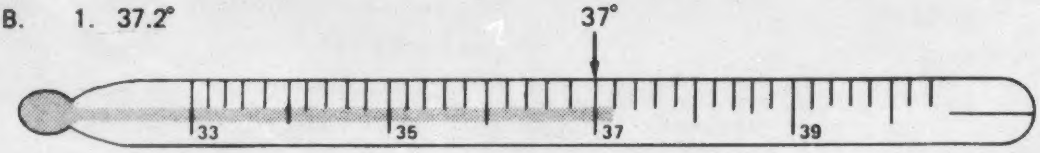

98.6°
92
94
96
98
100
102
104
106

PART II

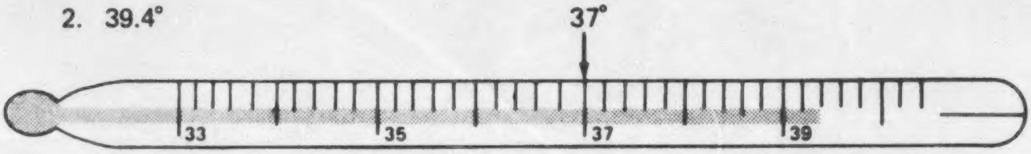
A. 1. 38.2°C

2. 36.6°C

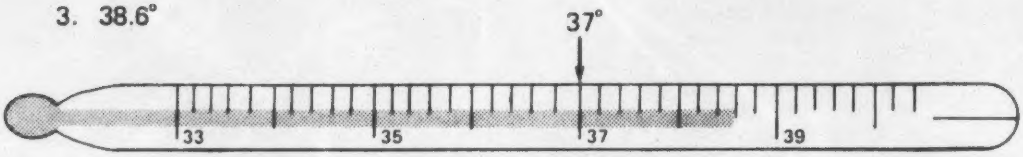
B. 1. 37.2°


37°
33
35
37
39

2. 39.4°


37°
33
35
37
39

3. 38.6°


37°
33
35
37
39

Assignment Sheet #4

3. a. 37.4°C
   b. 39°C
   c. 36°C
   d. 103°F
   e. 100.4°F
   f. 98.6°F

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #1--TAKE ORAL TEMPERATURE

I. Equipment needed

- A. Mercury-type thermometer and holder with antiseptic solution or electronic thermometer with plastic sheaths
- B. Watch with second hand
- C. Paper and pencil
- D. Clean tissue

II. Procedure for mercury-type thermometer

- A. Wash hands
- B. Assemble equipment and take to bedside
- C. Identify patient and explain procedure

  (**CAUTION**: Wait 15 minutes to take temperature if patient has recently taken hot or cold drink or is smoking.)

- D. Remove thermometer from container, holding near the end opposite mercury bulb; shake mercury down to 95°F or below
- E. Place mercury bulb under patient's tongue; ask patient to keep lips closed without biting thermometer; leave thermometer in place for three minutes; remain with patient if necessary

  (NOTE: Pulse and respirations may be counted at this time.)

- F. Remove and wipe thermometer with tissue from stem to bulb; discard tissue
- G. Read thermometer and record reading on paper immediately
- H. Recheck temperature, if indicated
- I. Care for thermometer
  1. Shake mercury down
  2. Clean thermometer starting from the top of the stem and working toward the bulb using a twisting motion; and place thermometer in holder

     (NOTE: Use institution's procedure for cleaning thermometer.)

  3. Replace equipment in designated area

JOB SHEET #1

J. Wash hands

K. Record temperature

L. Report any deviation from usual temperature to supervisor

III. Procedure for electronic thermometer

A. Wash hands

B. Assemble equipment

C. Activate electronic thermometer according to instructions

D. Put on clean protective sheath

E. Place tip of probe under patient's tongue for required length of time and record temperature on paper

F. Discard protective sheath

G. Recheck temperature, if indicated

H. Replace equipment in designated area

I. Wash hands

J. Report unusually high or low temperature

K. Record temperature

JOB SHEET #1

IV. Checklist for taking oral temperature

	Performed well	Needs improvement
A. To use mercury-type thermometer, gathered necessary equipment	☐	☐
Comments:		
B. Washed hands; assembled equipment and took to bedside	☐	☐
Comments:		
C. Identified patient and explained procedure	☐	☐
Comments:		
D. Removed thermometer from container, held near the end opposite mercury bulb; shook mercury down to 95° or below	☐	☐
Comments:		
E. Placed mercury bulb under patient's tongue; asked patient to keep lips closed without biting thermometer; left thermometer in place for three minutes; remained with patient if necessary	☐	☐
Comments:		

JOB SHEET #1

	Performed well	Needs improvement
F. Removed and wiped thermometer with tissue from stem to bulb; discarded tissue	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
G. Read thermometer and recorded reading on paper immediately	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
H. Rechecked temperature, if indicated	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
I. To care for thermometer, shook mercury down	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
J. Cleaned thermometer starting from the top of stem and working toward bulb using a twisting motion; placed thermometer in holder	☐	☐

Comments: ______________________________

____

____

JOB SHEET #1

		Performed well	Needs improvement
K.	Replaced equipment in designated area	☐	☐
	Comments: ______________________________		
L.	Washed hands, recorded temperature	☐	☐
	Comments: ______________________________		
M.	Reported any deviation from usual temperature to supervisor	☐	☐
	Comments: ______________________________		
N.	To use electronic thermometer, gathered necessary equipment	☐	☐
	Comments: ______________________________		
O.	Washed hands; assembled equipment	☐	☐
	Comments: ______________________________		

JOB SHEET #1

		Performed well	Needs improvement
P.	Activated electronic thermometer according to instructions	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
Q.	Put on clean protective sheath	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
R.	Placed tip of probe under patient's tongue for required length of time and recorded temperature on paper	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
S.	Discarded protective sheath	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
T.	Rechecked temperature, if indicated	☐	☐

Comments: ______________________________

____

____

JOB SHEET #1

	Performed well	Needs improvement
U. Replaced equipment in designated area	☐	☐
Comments: ____ ____ ____		
V. Washed hands	☐	☐
Comments: ____ ____ ____		
W. Reported unusually high or low temperature	☐	☐
Comments: ____ ____ ____		
X. Recorded temperature	☐	☐
Comments: ____ ____ ____		

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #2--TAKE RECTAL TEMPERATURE

I. Equipment needed

   A. Container with clean rectal thermometer

   B. Clean tissue

   C. Lubricant

   D. Paper and pen

   E. Watch with second hand

II. Procedure

   A. Wash hands

   B. Assemble equipment

   (NOTE: When electronic thermometer is used, follow manufacturer's instructions.)

   C. Identify patient and explain procedure

   D. Provide privacy

   E. Position patient

      1. Place adult patient on side and flex upper knee

      2. Place child on abdomen with face to side unless physical condition makes this inadvisable

   F. Expose rectal area

   G. Raise upper buttock so anus is clearly seen and insert lubricated bulb gently into rectum about one and one-half inches (3.5 cm) in adult

   (NOTE: Rectal thermometer in children and infants should be inserted approximately one-half - one inch.)

   H. HOLD thermometer in place for three-five minutes

   (**CAUTION**: Do not leave patient while rectal temperature is being taken. If the patient moves and the thermometer is not being held, it can slip inside and injure the rectum or require surgical removal.)

   I. Remove thermometer; wipe with clean tissue from stem to bulb; discard tissue

JOB SHEET #2

J. Read thermometer

K. Wash thermometer in cool water; replace in holder

L. Wash hands

M. Record temperature reading on paper

N. Make patient comfortable

O. Wash hands

P. Record temperature; indicate on record that temperature was taken rectally (R)

Q. Report unusually high or low temperatures

JOB SHEET #2

III. Checklist for taking rectal temperature

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments:		
B. Washed hands; assembled equipment	☐	☐
Comments:		
C. Identified patient and explained procedure	☐	☐
Comments:		
D. Provided privacy	☐	☐
Comments:		
E. To position adult patient, placed patient on side and flexed upper knee	☐	☐
Comments:		

JOB SHEET #2

		Performed well	Needs improvement
F.	To position child, placed on abdomen with face to side unless physical condition made this inadvisable	☐	☐
	Comments: ____________________		
G.	Exposed rectal area	☐	☐
	Comments: ____________________		
H.	Raised upper buttock so anus was clearly seen and inserted lubricated bulb gently into rectum about one and one-half inches (3.5 cm) in adult	☐	☐
	Comments: ____________________		
I.	Held thermometer in place for three-five minutes	☐	☐
	Comments: ____________________		
J.	Removed thermometer; wiped with clean tissue from stem to bulb; discarded tissue	☐	☐
	Comments: ____________________		

JOB SHEET #2

		Performed well	Needs improvement
K.	Read thermometer	☐	☐
	Comments: ______________________________		
L.	Washed thermometer in cool water; replaced in holder	☐	☐
	Comments: ______________________________		
M.	Washed hands	☐	☐
	Comments: ______________________________		
N.	Recorded temperature reading on paper	☐	☐
	Comments: ______________________________		
O.	Made patient comfortable; washed hands	☐	☐
	Comments: ______________________________		
P.	Recorded temperature; indicated on record that temperature was taken rectally (R)	☐	☐
	Comments: ______________________________		

JOB SHEET #2

	Performed well	Needs improvement
Q. Reported unusual high or low temperatures	☐	☐

Comments: ______________________________

____

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CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #3--TAKE AXILLARY TEMPERATURE

I. Equipment needed

   A. Clean thermometer

   B. Thermometer holder

   C. Watch with second hand

   D. Paper and pen

II. Procedure

   A. Wash hands

   B. Assemble equipment and take to bedside

   C. Identify patient and explain procedure

   D. Position patient comfortably; be sure axilla is dry

   (NOTE: If axilla is wet, pat dry. Excessive rubbing will generate heat.)

   E. Place thermometer in axilla

      1. Leave thermometer in place for 10 minutes

      2. Have patient hold arm tightly against chest

   F. Remove thermometer, wipe, read, and record temperature immediately on paper indicating temperature was taken in the axilla (ax)

   G. Leave patient in a comfortable position

   H. Clean thermometer and return equipment to designated area

   I. Wash hands

   J. Record temperature on form provided, remembering to put (ax) above temperature; report any significant elevation

   (NOTE: When electronic thermometer is used, follow manufacturer's instructions.)

   K. Report any unusual high or low temperatures

JOB SHEET #3

III. Checklist for taking axillary temperature

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ____________________ ____________________ ____________________		
B. Washed hands; assembled equipment and took to bedside	☐	☐
Comments: ____________________ ____________________ ____________________		
C. Identified patient and explained procedure	☐	☐
Comments: ____________________ ____________________ ____________________		
D. Positioned patient comfortably; made sure axilla was dry	☐	☐
Comments: ____________________ ____________________ ____________________		
E. Placed thermometer in axilla; left in place for 10 minutes; had patient hold arm tightly against chest	☐	☐
Comments: ____________________ ____________________ ____________________		

JOB SHEET #3

		Performed well	Needs improvement
F.	Removed thermometer, wiped, read, and recorded termperature immediately on paper indicating temperature was taken in the axilla (ax)	☐	☐
	Comments:		
G.	Left patient in comfortable position	☐	☐
	Comments:		
H.	Cleaned thermometer and returned equipment to designated area	☐	☐
	Comments:		
I.	Washed hands	☐	☐
	Comments:		
J.	Recorded temperature on form provided, remembered to put (ax) above temperature; reported any significant elevation	☐	☐
	Comments:		

JOB SHEET #3

	Performed well	Needs Improvement
K. Reported any unusually high or low temperatures	☐	☐

Comments: ____

____

____

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #4--CLEAN THERMOMETERS

I. Equipment needed

   A. Two small basins

   B. Soap

   C. Cotton balls

   D. Disinfectant

   E. Thermometers

II. Safety factors

   A. Always use cool tap water

   B. Handle with care to avoid breakage

   C. Clean rectal thermometers separately from oral thermometers

III. Procedure

   A. Assemble equipment

      1. Use cool water and soap to fill one basin

      2. Fill other basin with disinfectant

   B. Wash thermometers in soapy water using cotton balls; rinse with cool water

   C. Place thermometers in disinfectant so all are covered

   (NOTE: Check for cleansing procedure in each institution.)

   D. Remove thermometers from disinfectant, rinse with cold water, and dry

   E. Store thermometer in designated place

   F. Replace equipment

   G. Wash hands

   (**CAUTION**: When thermometers are kept in patient's room, they should be washed after each use before storing.)

JOB SHEET #4

IV. Checklist for cleaning thermometers

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ____________________		
B.	Observed safety factors by always using cool tap water, handling with care to avoid breakage, and cleaning rectal thermometers separately from oral thermometers	☐	☐
	Comments: ____________________		
C.	Assembled equipment, using cool water and soap to fill one basin; filled other basin with disinfectant	☐	☐
	Comments: ____________________		
D.	Washed thermometers in soapy water using cotton balls; rinsed with cool water	☐	☐
	Comments: ____________________		
E.	Placed thermometers in disinfectant so all were covered	☐	☐
	Comments: ____________________		

JOB SHEET #4

		Performed well	Needs improvement
F.	Removed thermometers from disinfectant, rinsed with cold water, and dried	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
G.	Stored thermometers in designated place	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
H.	Replaced equipment; washed hands	☐	☐

Comments: ____________________

____

____

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #5--TAKE PULSE AND RESPIRATIONS

(NOTE: This procedure can be done while you are monitoring patient's oral and axillary temperature.)

I. Equipment needed

   A. Watch with second hand

   B. Pen and paper or chart

II. Procedure

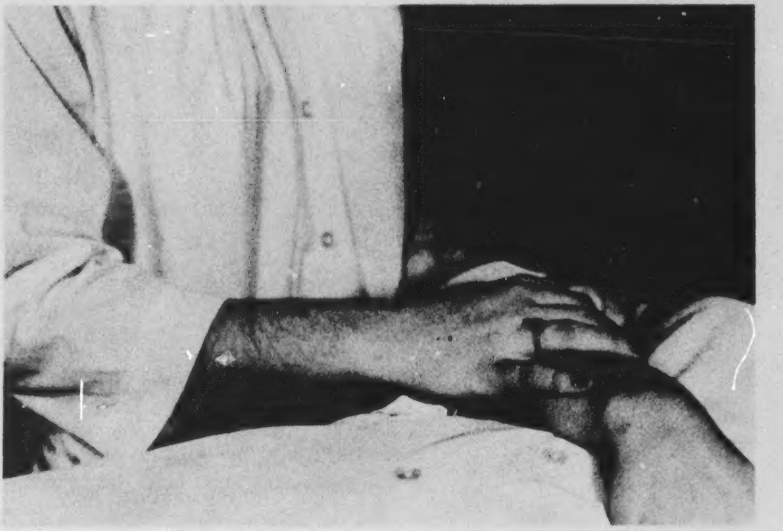
   A. Wash hands

   B. Assemble equipment

   C. Identify patient and explain procedure

   D. Place patient's arm across chest (Figure 1)

FIGURE 1

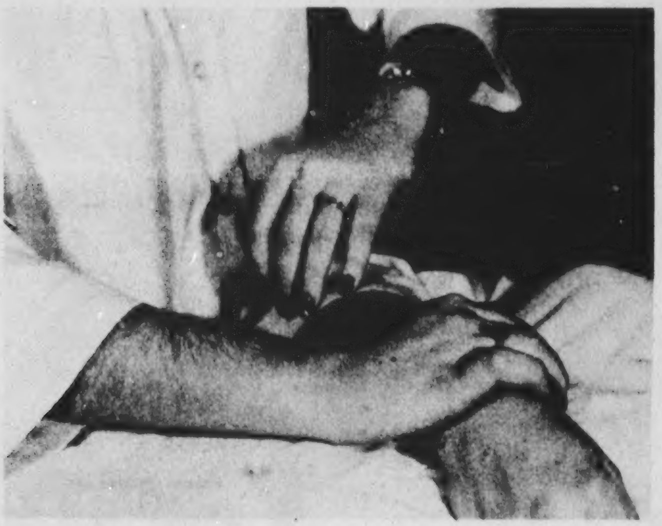


JOB SHEET #5

E. Place tips of first two fingers over radial artery on thumb side of wrist, exerting slight pressure (Figure 2)

(NOTE: Do not use your thumb as it has pulse of its own that will be confusing and pulse rate will be inaccurate.)

FIGURE 2



F. Locate pulse, hold, and count, using second hand watch

G. Count respirations after pulse count

(NOTE: While still holding wrist, closely observe patient's respirations, remembering that you must count a full inspiration and expiration to be accurate. It is a good idea to do this without the patient being aware of your observation.)

JOB SHEET #5

III. Checklist for taking pulse and respirations

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments:		
B.	Washed hands; assembled equipment	☐	☐
	Comments:		
C.	Identified patient and explained procedure	☐	☐
	Comments:		
D.	Placed patient's arm across chest	☐	☐
	Comments:		
E.	Placed tips of first two fingers over radial artery on thumb side of wrist, exerting slight pressure	☐	☐
	Comments:		

JOB SHEET #5

	Performed well	Needs improvement
F. Located pulse, held, and counted, using second hand watch	☐	☐
Comments: ________________________________		
G. Counted respirations after pulse count	☐	☐
Comments: ________________________________		

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #6–TAKE APICAL/RADIAL PULSE

I. Equipment needed

   A. Stethoscope

   B. Watch with second hand

   C. Paper and pen

II. Procedure (requires two persons counting simultaneously)

   A. Wash hands

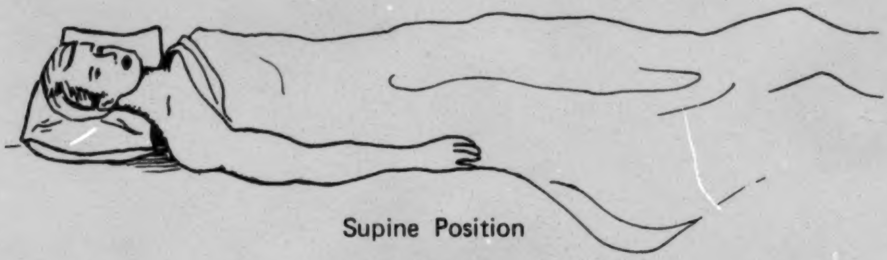
   B. Assemble equipment

   C. Identify patient and explain procedure

   D. Provide privacy

   E. Uncover left side of chest with patient in supine position (Figure 1)

FIGURE 1



Supine Position

   F. First person

      1. Locates apex of heart by placing fingertips on patient's chest below left nipple about the fifth intercostal space

      2. Places ear pieces of stethoscope in ears, places bell over apical region, and listens for heart sounds

      3. Counts the beats for one full minute on signal; notes rate, rhythm, and strength of beat

   G. On signal, second person counts radial pulse

JOB SHEET #6

H. Record on paper immediately

   1. Radial pulse rate, rhythm, and strength

   2. Apical pulse rate, rhythm, and strength

   3. Pulse deficit

   (NOTE: Apical pulse only is sometimes taken for certain procedures.)

I. Make patient comfortable

J. Clean and return equipment to designated area

K. Wash hands

L. Report and record procedure and observations

JOB SHEET #6

III. Checklist for taking apical/radial pulse

	Performed well	Needs Improvement
A. Gathered necessary equipment	☐	☐

Comments: ______________________

____

____

	Performed well	Needs Improvement
B. Washed hands; assembled equipment	☐	☐

Comments: ______________________

____

____

	Performed well	Needs Improvement
C. Identified patient and explained procedure	☐	☐

Comments: ______________________

____

____

	Performed well	Needs Improvement
D. Provided privacy	☐	☐

Comments: ______________________

____

____

	Performed well	Needs Improvement
E. Uncovered left side of chest with patient in supine position	☐	☐

Comments: ______________________

____

____

JOB SHEET #6

		Performed well	Needs improvement
F.	First person located apex of heart by placing fingertips on patient's chest below left nipple about the fifth intercostal space	☐	☐
	Comments:		
G.	First person placed ear pieces of stethoscope in ears, placed bell over apical region, and listened for heart sounds	☐	☐
	Comments:		
H.	First person counted the beats for one full minute on signal; noted rate, rhythm, and strength of beat	☐	☐
	Comments:		
I.	On signal, second person counted radial pulse	☐	☐
	Comments:		

JOB SHEET #6

		Performed well	Needs improvement
J.	Immediately recorded on paper radial pulse rate, rhythm, and strength; apical pulse rate, rhythm, and strength; pulse deficit	☐	☐
	Comments: ______________________________		
K.	Made patient comfortable	☐	☐
	Comments: ______________________________		
L.	Cleaned and returned equipment to designated area; washed hands	☐	☐
	Comments: ______________________________		
M.	Reported and recorded procedure and observations	☐	☐
	Comments: ______________________________		

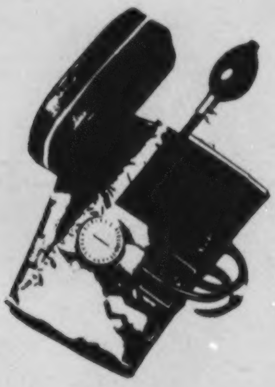
CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #7--TAKE BLOOD PRESSURE

I. Equipment needed

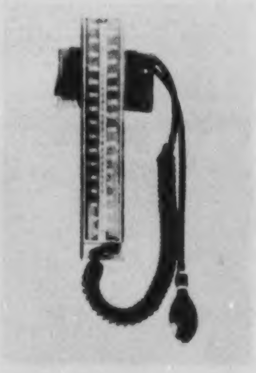
A. Sphygmomanometer (Figures 1 and 2)

FIGURE 1



Aneroid

FIGURE 2



Mercury

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B. Stethoscope

C. Pen, paper or chart

II. Procedure

A. Wash hands

B. Assemble equipment

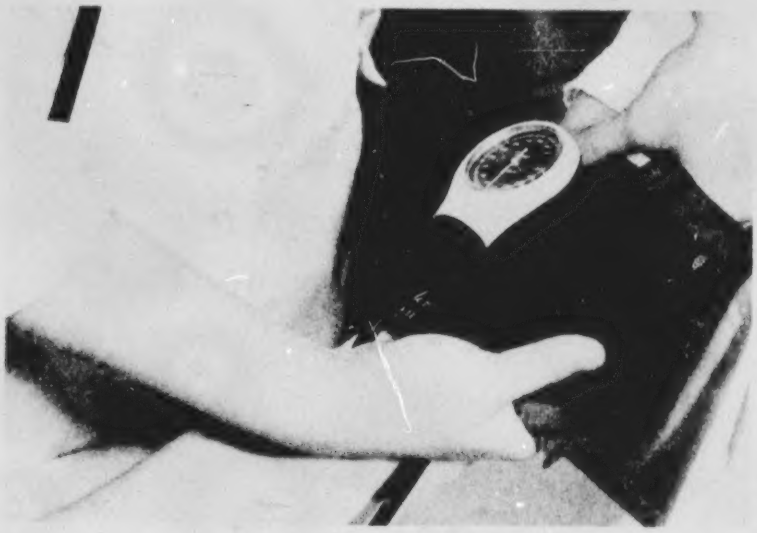
JOB SHEET #7

C. Identify patient and explain procedure

(NOTE: Patient should be lying down or sitting with arm supported by bed, table, or arm of chair.)

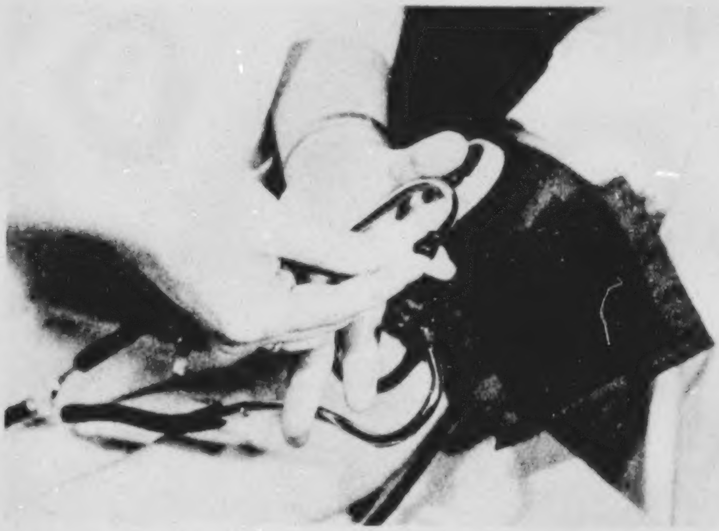
D. Apply cuff snugly to arm (preferably the left) above elbow with rubber bladder of cuff over brachial artery (Figure 3)

FIGURE 3



E. Clean ear pieces of stethoscope with alcohol or other antiseptic (Figure 4)

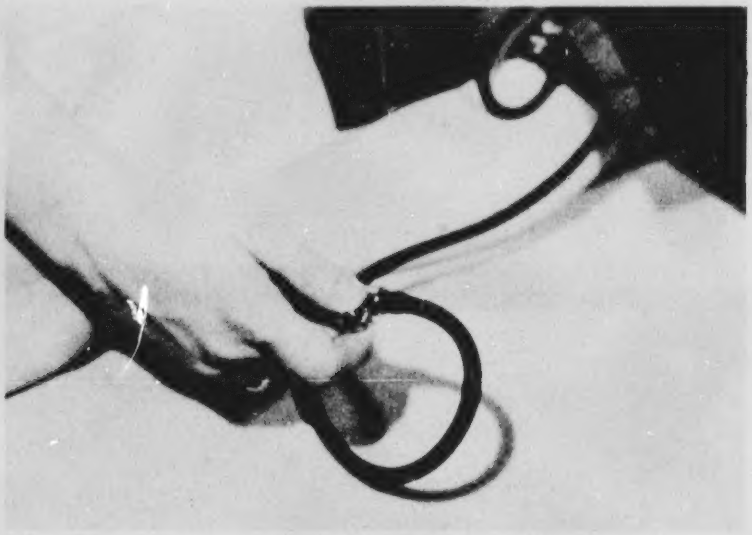
FIGURE 4



JOB SHEET #7

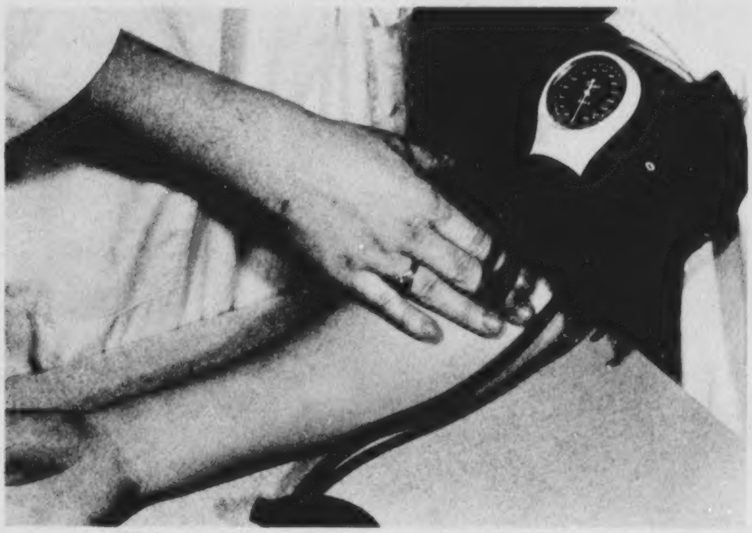
F. Place ear pieces of stethoscope in your ears; tighten screw on rubber bulb of sphygmomanometer (Figure 5)

FIGURE 5



G. Locate brachial artery pulse with fingertips and place diaphragm or bell of stethoscope over pulse beat (Figure 6)

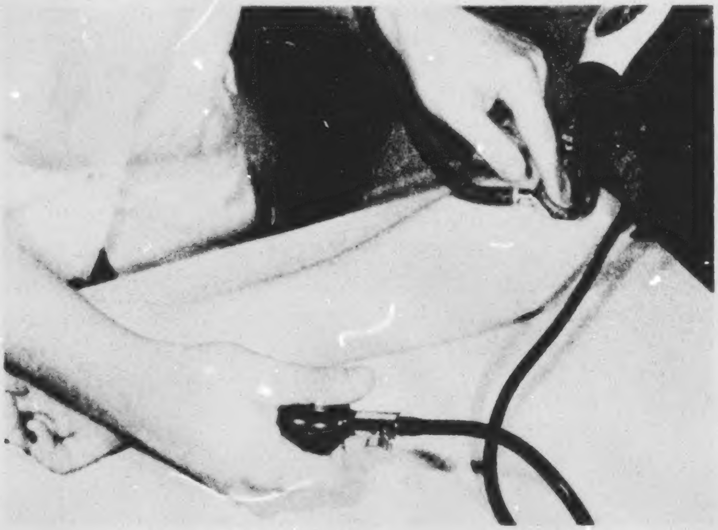
FIGURE 6



JOB SHEET #7

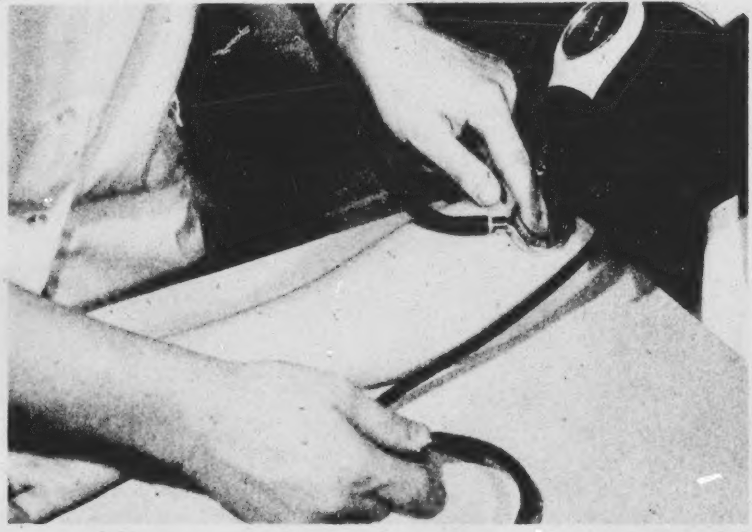
H. Inflate cuff by squeezing bulb until pulse ceases, then inflate cuff 20 points higher (Figure 7)

FIGURE 7



I. Open valve (thumb screw), slowly releasing air until thumping sound is heard (Figure 8)

FIGURE 8



JOB SHEET #7

J. Observe and remember the number where the first strong sound is heard; this is the systolic pressure

K. Continue to listen while releasing air gradually from cuff

L. Observe number where sound changes or ceases; this is the diastolic pressure

M. Allow air to escape so pressure falls to zero

N. Wait one minute with cuff deflated, then repeat the procedures

(NOTE: If using electronic blood pressure indicator, use manufacturer's instructions.)

O. Clean earpieces of stethoscope again with alcohol

JOB SHEET #7

III. Checklist for taking blood pressure

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ____________________		
B. Washed hands; assembled equipment	☐	☐
Comments: ____________________		
C. Identified patient and explained procedure	☐	☐
Comments: ____________________		
D. Applied cuff snugly to arm (preferably the left) above elbow with rubber bladder to cuff over brachial artery	☐	☐
Comments: ____________________		
E. Cleaned ear pieces of stethoscope with alcohol or other antiseptic	☐	☐
Comments: ____________________		

JOB SHEET #7

		Performed well	Needs improvement
F.	Placed ear pieces of stethoscope in ears; tightened screw on rubber bulb of sphygmomanometer	☐	☐
	Comments: ________________		
G.	Located brachial artery pulse with fingertips and placed diaphragm or bell of stethoscope over pulse beat	☐	☐
	Comments: ________________		
H.	Inflated cuff by squeezing bulb until pulse ceased, then inflated cuff 20 points higher	☐	☐
	Comments: ________________		
I.	Opened valve (thumb screw), slowly releasing air until thumping sound was heard	☐	☐
	Comments: ________________		
J.	Observed and remembered the number where the first strong sound was heard; this was the systolic pressure	☐	☐
	Comments: ________________		

JOB SHEET #7

	Performed well	Needs improvement
K. Continued to listen while releasing air gradually from cuff	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
L. Observed number where sound changed or ceased; this was the diastolic pressure	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
M. Allowed air to escape so pressure fell to zero	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
N. Waited one minute with cuff deflated, then repeated the procedures	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
O. Cleaned earpieces of stethoscope again with alcohol	☐	☐

Comments: ____________________

____

____

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #8--USE A HOT WATER BOTTLE

I. Equipment needed

- A. Hot water bottle
- B. Cover for bottle
- C. Bath thermometer
- D. Graduated container

II. Procedure

- A. Wash hands
- B. Fill graduated container with water and test temperature approximately 115°-120°F (45°C-50°C)
- C. Fill hot water bottle approximately one-half or one-third full
- D. Expel air from hot water bottle
  1. Place water bottle on ledge of sink
  2. Hold neck of bottle upright until water reaches neck of bottle; secure top
- E. Check for leakage; place in cover
- F. Replace thermometer and graduated container
- G. Take hot water bottle to patient's bedside
- H. Identify patient and explain procedure
- I. Provide privacy
- J. Place bottle on affected area

  (**CAUTION:** Never allow a patient to lie on a hot water bottle. Never place any form of heat equipment against the skin of any patient.)
- K. Place communication device within reach of patient
- L. Check patient and affected area frequently
- M. Check bottle at least every 30 minutes and refill when cool

JOB SHEET #8

N. Remove hot water bottle at end of prescribed time or if adverse reaction occurs

O. Clean and return bottle and cover to designated area

P. Wash hands

Q. Report and record treatment and effects

JOB SHEET #8

III. Checklist for using a hot water bottle

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ____________________		
B. Washed hands	☐	☐
Comments: ____________________		
C. Filled graduated container with water and tested temperature approximately 115°-120°F (45°C - 50°C)	☐	☐
Comments: ____________________		
D. Filled hot water bottle approximately one-half or one-third full	☐	☐
Comments: ____________________		
E. To expel air from hot water bottle, placed water bottle on ledge of sink; held neck of bottle upright until water reached neck of bottle, secured top	☐	☐
Comments: ____________________		

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JOB SHEET #8

		Performed well	Needs improvement
F.	Checked for leakage; placed in cover	☐	☐
	Comments: ____________________		
G.	Replaced thermometer and graduated container	☐	☐
	Comments: ____________________		
H.	Took hot water bottle to patient's bedside	☐	☐
	Comments: ____________________		
I.	Identified patient and explained procedure	☐	☐
	Comments: ____________________		
J.	Provided privacy	☐	☐
	Comments: ____________________		
K.	Placed bottle on affected area	☐	☐
	Comments: ____________________		

JOB SHEET #8

		Performed well	Needs improvement
L.	Placed communication device within reach of patient	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
M.	Checked patient and affected area frequently	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
N.	Checked bottle at least every 30 minutes and refilled when cool	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
O.	Removed hot water bottle at end of prescribed time or if adverse reaction occurred	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
P.	Cleaned and returned bottle and cover to designated area	☐	☐

Comments: ____________________

____

____

JOB SHEET #8

		Performed well	Needs improvement
Q.	Washed hands	☐	☐
R.	Reported and recorded treatment and effects	☐	☐

Q. Comments: ______________________________

____

____

R. Comments: ______________________________

____

____

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #9--USE AN AQUA PAD/K-PAD

I. Equipment needed

- A. Aqua pad/K-pad with control
- B. Pillowcase
- C. Sterile distilled water

  (NOTE: Some of the new models use tap water.)

II. Procedure

- A. Check physician's order
- B. Obtain equipment

  (NOTE: Usually a requisition for an aqua pad/K-pad will need to be filled out and sent to Central Supply.)

- C. Check equipment

  (NOTE: Check temperature setting and electrical cord and plug. The temperature is usually set by the person in Central Supply and locked in. The key is usually kept at a central location.)

- D. Wash hands
- E. Identify and patient and explain procedure
- F. Provide privacy
- G. Drape patient as needed with bath blanket or sheets
- H. Place heating control and reservoir on bedside table
- I. Attach jacks to the reservoir area
- J. Fill reservoir full of distilled or tap water as manufacturer's instructions indicate
- K. Plug pad into outlet
- L. Cover pad with pillowcase
- M. Turn pad to "on" position

  (NOTE: Observe the water level in the reservoir as it will normally drop; add water as necessary.)

JOB SHEET #9

N. Screw cap on the reservoir fully; then loosen one-fourth of a turn

O. Place pad on area indicated in the order

P. Make sure that tubing and motor unit are level with the patient

(**CAUTION**: Do not use pins to fasten cover.)

Q. Place communication device within reach of patient

R. Wash hands

S. Record the time, procedure, and area applied in the chart

T. Check patient and pad frequently

JOB SHEET #9

III. Checklist for using an aqua pad/K-pad

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________________________		
B. Checked physician's order	☐	☐
Comments: ______________________________		
C. Obtained and checked equipment	☐	☐
Comments: ______________________________		
D. Washed hands	☐	☐
Comments: ______________________________		
E. Identified patient and explained procedure	☐	☐
Comments: ______________________________		
F. Provided privacy	☐	☐
Comments: ______________________________		

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JOB SHEET #9

	Performed well	Needs improvement
G. Draped patient as needed with bath blanket or sheets	☐	☐
Comments: ______________________		
H. Placed heating control and reservoir on bedside table	☐	☐
Comments: ______________________		
I. Attached jacks to reservoir area	☐	☐
Comments: ______________________		
J. Filled reservoir full of distilled or tap water as manufacturer's instructions indicated	☐	☐
Comments: ______________________		
K. Plugged pad into outlet	☐	☐
Comments: ______________________		

JOB SHEET #9

		Performed well	Needs improvement
L.	Covered pad with pillowcase	☐	☐
	Comments: ______________________		
M.	Turned pad to "on" position	☐	☐
	Comments: ______________________		
N.	Screwed cap on reservoir fully; then loosened one-fourth of a turn	☐	☐
	Comments: ______________________		
O.	Placed pad on area indicated in order	☐	☐
	Comments: ______________________		
P.	Made sure tubing and motor unit were level with patient	☐	☐
	Comments: ______________________		
Q.	Placed communication device within reach of patient	☐	☐
	Comments: ______________________		

JOB SHEET #9

		Performed well	Needs improvement
R.	Washed hands	☐	☐
	Comments: ____________________		
S.	Recorded time, procedure, and area applied in chart	☐	☐
	Comments: ____________________		
T.	Checked patient and pad frequently	☐	☐
	Comments: ____________________		

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #10--USE AN ELECTRIC HEATING PAD

(NOTE: Application of a heating pad *must be* ordered by physician. Release form may be needed; follow hospital policy.)

I. Equipment needed

  A. Electric heating pad

  B. Cover

II. Procedure

  A. Wash hands

  B. Assemble equipment

  C. Check pad by plugging it into an electrical outlet

  (**CAUTION:** Pad should begin to warm immediately. Do not use any pad with a frayed or worn cord. Observe safety rules when using any electrical equipment.)

  D. Take covered pad to patient's bedside

  E. Identify patient and explain procedure, stressing necessary safety measures

  F. Plug in cord as close to the bed as possible; turn control button to "low"

  G. Place pad on the affected area; secure pad in place

  (**CAUTION:** Never allow patient to lie directly on a heating pad.)

  H. Place communication device within reach of patient

  I. Return frequently

    1. Check patient closely

    2. Check appliance to see that it is working properly

    3. Check patient's skin closely for increased or decreased redness, pain, or blood circulation

    4. Discontinue treatment immediately and report to the person in charge, if adverse symptoms or reactions develop

JOB SHEET #10

J. Remove heating pad when treatment is completed

K. Provide for patient's comfort

L. Return equipment to designated area

M. Report and record treatment

JOB SHEET #10

III. Checklist for using an electric heating pad

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ____________________ ____________________ ____________________		
B.	Washed hands; assembled equipment	☐	☐
	Comments: ____________________ ____________________ ____________________		
C.	Checked pad by plugging it into an electrical outlet	☐	☐
	Comments: ____________________ ____________________ ____________________		
D.	Took covered pad to patient's bedside	☐	☐
	Comments: ____________________ ____________________ ____________________		
E.	Identified patient and explained procedure, stressing necessary safety measures	☐	☐
	Comments: ____________________ ____________________ ____________________		

JOB SHEET #10

		Performed well	Needs improvement
F.	Plugged in cord as close to bed as possible; turned control button to "low"	☐	☐
	Comments: ______________________		
G.	Placed pad on affected area; secured pad in place	☐	☐
	Comments: ______________________		
H.	Placed communication device within reach of patient	☐	☐
	Comments: ______________________		
I.	Returned frequently and checked patient closely; checked appliance to see that it was working properly	☐	☐
	Comments: ______________________		
J.	Returned frequently and checked patient's skin closely for increased or decreased redness, pain, or blood circulation	☐	☐
	Comments: ______________________		

JOB SHEET #10

	Performed well	Needs improvement
K. Also discontinued treatment immediately and reported to person in charge, if adverse symptoms or reactions developed	☐	☐
Comments: ______________________		
L. Removed heating pad when treatment was completed	☐	☐
Comments: ______________________		
M. Provided for patient's comfort	☐	☐
Comments: ______________________		
N. Returned equipment to designated area	☐	☐
Comments: ______________________		
O. Reported and recorded treatment	☐	☐
Comments: ______________________		

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #11--ADMINISTER A CHEMICAL HOT PACK

(NOTE: The chemical hot pack comes in a variety of shapes and sizes. Selection depends upon site of treatment. The pack may be disposable. It is applied directly to the skin surface.)

I. Equipment needed

   A. Chemical hot pack

   B. Towels

II. Procedure

   A. Wash hands

   B. Obtain a chemical hot pack

   C. Take pack to bedside

   D. Identify patient and explain procedure

   E. Provide privacy

   F. Mix contents of package according to manufacturer's instructions

   (**CAUTION**: If package is punctured and contents leak onto the skin, wash thoroughly and quickly to avoid irritation.)

   G. Apply pack to designated area; if necessary, wrap with a towel

   H. Place communication device within reach of patient

   I. Return frequently

      1. Check patient's skin for an increase or decrease in redness, swelling, pain, and blood circulation

      2. Follow the same general principles and safety precautions for a chemical pack as for any other type of heat application

   J. Replace pack as needed to provide heat for the prescribed length of time

   L. Provide for patient's comfort; place communication device conveniently

   M. Wash hands

   N. Report and record treatment and observations

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JOB SHEET #11

III. Checklist for administering a chemical hot pack

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments:		
B. Washed hands	☐	☐
Comments:		
C. Obtained a chemical hot pack; took pack to bedside	☐	☐
Comments:		
D. Identified patient and explained procedure; provided privacy	☐	☐
Comments:		
E. Mixed contents of package according to manufacturer's instructions	☐	☐
Comments:		

JOB SHEET #11

		Performed well	Needs improvement
F.	Applied pack to designated area; if necessary, wrapped with towel	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
G.	Placed communication device within reach of patient	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
H.	Returned frequently and checked patient's skin for an increase or decrease in redness, swelling, pain, and blood circulation	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
I.	Also followed the same general principles and safety precautions for a chemical pack as for any other type of heat application	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
J.	Replaced pack as needed to provide heat for prescribed length of time	☐	☐

Comments: ____________________

____

____

JOB SHEET #11

		Performed well	Needs improvement
K.	Provided for patient's comfort; placed communication device conveniently	☐	☐
	Comments:		
L.	Washed hands	☐	☐
	Comments:		
M.	Reported and recorded treatment and observations	☐	☐
	Comments:		

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #12--USE A HEAT LAMP

(NOTE: A variety of heat lamps are available and specific instructions should be given. If there are no instructions, consult with supervisor before using equipment.)

I. Equipment needed--Heat lamp with 40-watt bulb

II. Procedure

  A. Wash hands

  B. Take lamp to bedside

  C. Identify patient and explain procedure

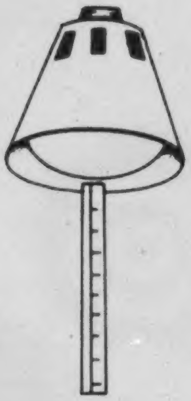
  D. Provide privacy

  E. Replace top covers with bath blanket or cover

  F. Position patient for comfort and expose area to be treated

  G. Place lamp 18-20 inches from area to be treated (Figure 1)

FIGURE 1



  H. Place communication device within reach of patient

JOB SHEET #12

I. Return frequently

(NOTE: Checking depends on the patient's condition and skin type.)

1. Check position of lamp and patient
2. Observe patient's skin for signs of excessive heat and redness
3. Check patient for adverse symptoms or complaints of too much heat

J. Remove heat lamp when treatment is completed

K. Replace covers and provide for patient's comfort; place communication device conveniently

L. Wash hands

M. Report and record treatment and observations

JOB SHEET #12

III. Checklist for using a heat lamp

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments:		
B. Washed hands	☐	☐
Comments:		
C. Took lamp to bedside	☐	☐
Comments:		
D. Identified patient and explained procedure	☐	☐
Comments:		
E. Provided privacy	☐	☐
Comments:		
F. Replaced top covers with bath blanket or cover	☐	☐
Comments:		

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JOB SHEET #12

		Performed well	Needs improvement
G.	Positioned patient for comfort and exposed area to be treated	☐	☐
	Comments: ______________________________		
H.	Placed lamp 18-20 inches from area to be treated	☐	☐
	Comments: ______________________________		
I.	Placed communication device within reach of patient	☐	☐
	Comments: ______________________________		
J.	Returned frequently and checked position of lamp and patient	☐	☐
	Comments: ______________________________		
K.	Returned frequently and observed patient's skin for signs of excessive heat and redness	☐	☐
	Comments: ______________________________		

JOB SHEET #12

		Performed well	Needs improvement
L.	Also checked patient for adverse symptoms or complaints of too much heat	☐	☐
	Comments:		
M.	Removed heat lamp when treatment was completed	☐	☐
	Comments:		
N.	Replaced covers and provided for patient's comfort; placed communication device conveniently	☐	☐
	Comments:		
O.	Washed hands	☐	☐
	Comments:		
P.	Reported and recorded treatment and observations	☐	☐
	Comments:		

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #13--USE A HEAT CRADLE

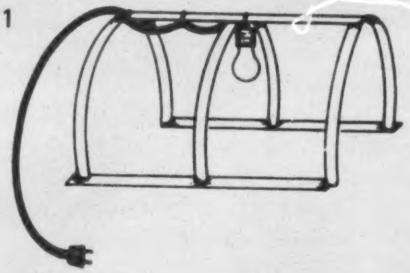
(NOTE: The heat cradle is like the cradle used to keep the bedding off of patient's body with an electric cord and bulb attached to provide heat. When used, the cradle is covered by a sheet or top bedding to keep heat within the area. The size of the cradle permits circulation of air. A heat cradle is usually used on the lower trunk or legs to promote healing of wounds, to increase circulation, to provide warmth, or to dry a plaster cast.)

I. Equipment needed

   A. Heat cradle (Figure 1)

   (NOTE: A 40-watt bulb may be used unless otherwise indicated.)

FIGURE 1



   B. Bath blanket

II. Procedure

   A. Wash hands

   B. Take heat cradle to bedside

   C. Identify patient and explain procedure

   D. Provide privacy

   E. Replace top covers with bath blanket or cover

   F. Position cradle over area to be treated

   G. Plug in cord as near bed as possible; place cord where it will not be in the way

   H. Cover cradle with top bedding; remove bath blanket

   (CAUTION: Be sure patient and covers are a safe distance from the light bulb.)

JOB SHEET #13

I. Provide cover as needed to avoid exposure

J. Place communication device within reach of patient

K. Return frequently; check for excessive heat or adverse reaction to treatment

L. Remove cradle when treatment is completed

M. Replace covers and provide for patient's comfort; place communication device conveniently

N. Wash hands

O. Report and record treatment and observations

JOB SHEET #13

III. Checklist for using a heat cradle

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments:		
B.	Washed hands	☐	☐
	Comments:		
C.	Took heat cradle to bedside	☐	☐
	Comments:		
D.	Identified patient and explained procedure; provided privacy	☐	☐
	Comments:		
E.	Replaced top covers with bath blanket or cover	☐	☐
	Comments:		

JOB SHEET #13

	Performed well	Needs improvement
F. Positioned cradle over area to be treated	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
G. Plugged in cord as near bed as possible; placed cord where it would not be in the way	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
H. Covered cradle with top bedding; removed bath blanket	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
I. Provided cover as needed to avoid exposure	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
J. Placed communication device within reach of patient	☐	☐

Comments: ____________________

____

____

JOB SHEET #13

	Performed well	Needs improvement
K. Returned frequently; checked for excessive heat or adverse reaction to treatment	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
L. Removed cradle when treatment was completed	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
M. Replace covers and provided for patient's comfort; placed communication device conveniently	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
N. Washed hands	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
O. Reported and recorded treatment and observations	☐	☐

Comments: ______________________________

____

____

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #14--APPLY WARM, WET COMPRESSES

I. Equipment needed

   A. Compress cloths

   B. Heat source

   C. Bath towels

   D. Waterproof material

   E. Bath thermometer

   F. Tray

   G. Electric hot pack machine or basin of solution approximately 110°-115°F (44°-45°C)

II. Procedure

   A. Wash hands

   B. Assemble equipment and take to bedside

   (NOTE: Use electric hot pack machine according to instructions.)

   C. Identify patient and explain procedure

   D. Provide privacy

   E. Wring compresses as dry as possible; apply gradually to affected area

   (NOTE: Tolerance to heat varies greatly with each individual and the area involved. Only the patient knows when an application is too hot.)

   F. Cover compresses with waterproof material and a towel or other dry material

   G. Use heat source to keep compresses warm, as permitted

   H. Place communication device within reach of patient

   I. Return frequently to observe patient and area being treated

   J. Remove warm compresses and dry area gently

   K. Provide for patient's comfort; place communication device conveniently

JOB SHEET #14

L. Care for supplies and equipment

M. Wash hands

N. Report and record treatment and observations

JOB SHEET #14

III. Checklist for applying warm, wet compresses

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments:		
B.	Washed hands; assembled equipment and took to bedside	☐	☐
	Comments:		
C.	Identified patient and explained procedure	☐	☐
	Comments:		
D.	Provided privacy	☐	☐
	Comments:		
E.	Wrung compresses as dry as possible; applied gradually to affected area	☐	☐
	Comments:		

JOB SHEET #14

		Performed well	Needs improvement
F.	Covered compresses with waterproof material and a towel or other dry material	☐	☐
	Comments: ____________________		
G.	Used heat source to keep compresses warm, as permitted	☐	☐
	Comments: ____________________		
H.	Placed communication device within reach of patient	☐	☐
	Comments: ____________________		
I.	Returned frequently to observe patient and area being treated	☐	☐
	Comments: ____________________		
J.	Removed warm compresses and dried area gently	☐	☐
	Comments: ____________________		

JOB SHEET #14

	Performed well	Needs improvement
K. Provided for patient's comfort; placed communication device conveniently	☐	☐

Comments: ________________________________

____

____

	Performed well	Needs improvement
L. Cared for supplies and equipment	☐	☐

Comments: ________________________________

____

____

	Performed well	Needs improvement
M. Washed hands	☐	☐

Comments: ________________________________

____

____

	Performed well	Needs improvement
N. Reported and recorded treatment and observations	☐	☐

Comments: ________________________________

____

____

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #15--USE AN ICE BAG OR ICE COLLAR

I. Equipment needed

- A. Ice bag or ice collar
- B. Cloth cover
- C. Ice scoop or spoon
- D. Basin
- E. Ice cubes or crushed ice
- F. Paper towel
- G. Bath towel

II. Procedure

- A. Wash hands
- B. Assemble equipment
    1. Fill basin with ice
    2. Fill ice cap half full
    3. Expel air by resting ice cap or collar on table in horizontal position
    4. Close top
    5. Wipe with paper towel and check for leakage
    6. Cover

    (**CAUTION:** Cover must be used to prevent frostbite.)
- C. Take equipment to bedside
- D. Identify patient and explain procedure
- E. Place ice bag on designated area
- F. Place communication device within reach of patient

JOB SHEET #15

G. Return frequently to check patient and affected area

(NOTE: Prolonged application produces numbness and interruption of circulation and may cause pain.)

(**CAUTION:** Note any blanching or spotting of the skin which indicates interference with circulation. If this occurs, remove application immediately.)

H. Refill ice bag as necessary

I. Remove ice bag when treatment is finished; clean equipment and return to storage

J. Provide for patient's comfort; position communication device conveniently

K. Wash hands

L. Report and record treatment and observations

PN I - 1111-C

JOB SHEET #15

III. Checklist for using an ice bag or ice collar

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ____________________		
B.	Washed hands	☐	☐
	Comments: ____________________		
C.	To assemble equipment, filled basin with ice; filled ice cup half full	☐	☐
	Comments: ____________________		
D.	Expelled air by resting ice cap or collar on table in horizontal position	☐	☐
	Comments: ____________________		
E.	Closed top; wiped with paper towel and checked for leakage; covered	☐	☐
	Comments: ____________________		

JOB SHEET #15

		Performed well	Needs improvement
F.	Took equipment to bedside	☐	☐
	Comments:		
G.	Identified patient and explained procedure	☐	☐
	Comments:		
H.	Placed ice bag on designated area	☐	☐
	Comments:		
I.	Placed communication device within reach of patient	☐	☐
	Comments:		
J.	Returned frequently to check patient and affected area	☐	☐
	Comments:		

JOB SHEET #15

		Performed well	Needs improvement
K.	Refilled ice bag as necessary	☐	☐
	Comments: ____________________		
L.	Removed ice bag when treatment was finished; cleaned equipment and returned to storage	☐	☐
	Comments: ____________________		
M.	Provided for patient's comfort; positioned communication device conveniently	☐	☐
	Comments: ____________________		
N.	Washed hands	☐	☐
	Comments: ____________________		
O.	Reported and recorded treatment and observations	☐	☐
	Comments: ____________________		

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #16--APPLY A CHEMICAL COLD PACK

(NOTE: Chemical cold packs are manufactured in several sizes and shapes. When ingredients are mixed according to manufacturer's instructions, they produce a sustained, controlled temperature lasting from 30 minutes to four hours. The temperature range is from 50°-80°F [10°-28°C]. Because of the controlled temperature of the packs it is nearly impossible to cause a freeze burn on the patient. Since there are so many different kinds of cold packs made, it is essential to read the directions for the specific product being used.)

I. Equipment needed

  A. Chemical cold pack

  B. Towels

II. Procedure

  A. Wash hands

  B. Take chemical cold pack to bedside

  C. Identify patient and explain procedure

  D. Mix contents of package according to the manufacturer's instructions

  E. Apply pack to designated area, wrapping as necessary with a towel to keep pack in place

  F. Place communication device within reach of patient

  G. Return frequently to observe patient and affected area

  H. Replace pack as needed

  I. Remove pack when treatment is completed

  J. Provide for patient's comfort; positon communication device conveniently

  K. Wash hands

  L. Report and record treatment and observations

JOB SHEET #16

III. Checklist for applying a chemical cold pack

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________________________		
B. Washed hands; took chemical cold pack to bedside	☐	☐
Comments: ______________________________		
C. Identified patient and explained procedure	☐	☐
Comments: ______________________________		
D. Mixed contents of package according to manufacturer's instructions	☐	☐
Comments: ______________________________		
E. Applied pack to designated area, wrapping as necessary with a towel to keep pack in place	☐	☐
Comments: ______________________________		

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JOB SHEET #16

	Performed well	Needs improvement
F. Placed communication device within reach of patient	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
G. Returned frequently to observe patient and affected area	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
H. Replaced pack as needed	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
I. Removed pack when treatment was completed	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
J. Provided for patient's comfort; positioned communication device conveniently	☐	☐

Comments: ____________________

____

____

JOB SHEET #16

		Performed well	Needs improvement
K.	Washed hands	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		
L.	Reported and recorded treatment and observations	☐	☐
	Comments: ______________________________		
	______________________________		
	______________________________		

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #17--APPLY A COLD, MOIST PACK

I. Equipment needed

A. Basin containing cracked ice and water

B. Compresses

C. Small waterproof sheet

II. Procedure

A. Wash hands

B. Assemble equipment and take to bedside

C. Identify patient and explain procedure

D. Provide privacy

E. Remove top covers and replace them with bath blanket or cover, if necessary

F. Place waterproof sheet under area to be treated

G. Wring compress to prevent dripping; apply to affected area

H. Change compress frequently

I. Continue treatment for prescribed time

(NOTE: If patient is able to change compresses, explain procedure and allow patient to continue.)

J. Place communication device within reach of patient

K. Return frequently to observe patient and affected area

L. Remove compresses at end of prescribed time

M. Dry affected area gently

N. Provide for patient's comfort; position communication device conveniently

O. Clean equipment and return to storage

P. Wash hands

Q. Report and record treatment and observations

JOB SHEET #17

III. Checklist for applying a cold, moist pack

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________________		
B. Washed hands; assembled equipment and took to bedside	☐	☐
Comments: ______________________		
C. Identified patient and explained procedure; provided privacy	☐	☐
Comments: ______________________		
D. Removed top covers and replaced them with bath blanket or cover, if necessary	☐	☐
Comments: ______________________		
E. Placed waterproof sheet under area to be treated	☐	☐
Comments: ______________________		

JOB SHEET #17

	Performed well	Needs improvement
F. Wrung compress to prevent dripping; applied to affected area	☐	☐
Comments: ______________________________		
G. Changed compress frequently	☐	☐
Comments: ______________________________		
H. Continued treatment for prescribed time	☐	☐
Comments: ______________________________		
I. Placed communication device within reach of patient	☐	☐
Comments: ______________________________		
J. Returned frequently to observe patient and affected area	☐	☐
Comments: ______________________________		

JOB SHEET #17

	Performed well	Needs improvement
K. Removed compresses at end of prescribed time	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
L. Dried affected area gently	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
M. Provided for patient's comfort; positioned communication device conveniently	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
N. Cleaned equipment and returned to storage	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
O. Washed hands	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
P. Reported and recorded treatment and observations	☐	☐

Comments: ______________________________

____

____

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

JOB SHEET #18--GIVE A COOL OR TEPID SPONGE BATH

I. Equipment needed

- A. Three washcloths
- B. Three bath towels
- C. Waterproof pillowcase
- D. Bath thermometer
- E. Bath blanket or cover
- F. Small basin with ice
- G. Basin one-third to one-half full of solution at proper temperature
- H. Pencil and paper
- I. Thermometer with container

II. Procedure

- A. Wash hands
- B. Prepare equipment; fill basin with water
  1. For tepid sponge bath, water temperature should be kept between 85°-90°F (34°C)
  2. For cold sponge bath, water temperature should be kept between 65°-90°F (18°-33°C)
  3. For alcohol sponge bath, mix 70 percent alcohol with equal parts of water
- C. Take equipment to bedside
- D. Identify patient and explain procedure
- E. Offer bedpan or urinal
- F. Remove gown and top bedding; replace with bath blanket or other covers to eliminate unnecessary exposure
- G. Put waterproof case on pillow; cover with pillowcase
- H. Record temperature, pulse, and respirations

JOB SHEET #18

I. Place cool, moist towel over abdomen and cool, moist washcloths in axillae and groin

J. Sponge each arm for approximately five minutes; pat dry

K. Sponge chest for five minutes; pat dry

(NOTE: Do not sponge abdomen.)

L. Sponge each leg five minutes; pat dry

M. Turn patient on side

N. Sponge back for five minutes; pat dry

(**CAUTION:** Do not sponge longer than 30 minutes. If patient begins to chill or has other adverse effects, discontinue.)

O. Put on patient's gown or pajamas

P. Change linen as needed

Q. Replace top covers

R. Provide for patient's comfort; position communication device conveniently

S. Clean and replace equipment

T. Wash hands

U. Take temperature, pulse, and respirations every 30 minutes after sponge bath is completed

V. Report and record treatment and observations

JOB SHEET #18

III. Checklist for giving a cool or tepid sponge bath

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ______________________ ______________________ ______________________		
B.	Washed hands	☐	☐
	Comments: ______________________ ______________________ ______________________		
C.	Prepared equipment; filled basin with water	☐	☐
	Comments: ______________________ ______________________ ______________________		
D.	For tepid sponge bath, water should have been kept between 85°-90°F (34°C)	☐	☐
	Comments: ______________________ ______________________ ______________________		
E.	For cold sponge bath, water temperature should have been kept between 65°-90°F (18°-33°C)	☐	☐
	Comments: ______________________ ______________________ ______________________		

JOB SHEET #18

		Performed well	Needs improvement
F.	For alcohol sponge bath, mixed 70 percent alcohol with equal parts of water	☐	☐
	Comments:		
G.	Took equipment to bedside	☐	☐
	Comments:		
H.	Identified patient and explained procedure	☐	☐
	Comments:		
I.	Offered bedpan or urinal	☐	☐
	Comments:		
J.	Removed gown and top beddng; replaced with bath blanket or other covers to eliminate unnecessary exposure	☐	☐
	Comments:		

JOB SHEET #18

		Performed well	Needs improvement
K.	Put waterproof case on pillow; covered with pillowcase	☐	☐
	Comments: ______		
L.	Recorded temperature, pulse and respirations	☐	☐
	Comments: ______		
M.	Placed cool, moist towel over abdomen and cool, moist washcloths in axillae and groin	☐	☐
	Comments: ______		
N.	Sponged each arm for approximately five minutes; patted dry	☐	☐
	Comments: ______		
O.	Sponged chest for five minutes; patted dry	☐	☐
	Comments: ______		

JOB SHEET #18

		Performed well	Needs improvement
P.	Sponged each leg five minutes; patted dry	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
Q.	Turned patient on side	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
R.	Sponged back for five minutes; patted dry	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
S.	Put on patient's gown or pajamas	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
T.	Changed linen as needed	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
U.	Replaced top covers	☐	☐

Comments: ____________________

____

____

JOB SHEET #18

		Performed well	Needs improvement
V.	Provided for patient's comfort; positioned communication device conveniently	☐	☐
	Comments: ______________________________		
W.	Cleaned and replaced equipment	☐	☐
	Comments: ______________________________		
X.	Washed hands	☐	☐
	Comments: ______________________________		
Y.	Took temperature, pulse, and respirations every 30 minutes after sponge bath was completed	☐	☐
	Comments: ______________________________		
Z.	Reported and recorded treatment and observations	☐	☐
	Comments: ______________________________		

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

TEST

NAME________________________ SCORE______________

1. Match terms associated with the circulatory system to the correct definitions. Write the correct numbers in the blanks. Definitions are continued on the next page.

_____a. Membranous structure in a hollow organ or passage that temporarily closes to permit flow of fluid in one direction only

_____b. Cardiovascular organs consisting of the heart, blood vessels (arteries, arterioles, capillaries, venules, veins, and sinuses), and the lymphatic system

_____c. Arteries that surround the base of the brain formed by communicating branches of cerebral arteries

_____d. Vessels which supply blood to the walls of the heart

_____e. Blood vessel that carries blood from the heart

_____f. Wall down the middle of the heart that divides into right and left sides

_____g. Small bundles of special lymphoid tissue; also called lymph glands

_____h. Pacemaker; small mass of specialized muscle fibers in the wall of the right atrium where the rhythm of the cardiac contraction is usually established

_____i. Study of the heart

_____j. Main trunk of the arterial system; largest artery

_____k. Network of spaces in the dura mater which drain blood from the brain into the jugular vein

_____l. Very small artery that, at its distal end, leads to a capillary

_____m. Mass of specialized muscle fibers located in the septum at the junction of the four chambers

1. Artery
2. Venous sinuses
3. Coronary
4. Circle of Willis
5. Valve
6. Circulatory system
7. Cardiology
8. Septum
9. Aorta
10. S-A node
11. Lymph nodes
12. Arteriole
13. Vein
14. Capillary
15. Cusp
16. A-V node
17. Oxygen
18. Carbon dioxide

______n. Blood vessel that carries blood to the heart

______o. Flap of valves that open and close

______p. Minute blood vessel between arterioles and venules, or a similar channel containing lymph

______q. Non-metallic element occurring freely in the atmosphere as a colorless, odorless, tasteless gas

______r. Colorless gas, heavier than air and exhaled by all animals

2. Select from the following list functions of the circulatory system. Write an "X" in the correct blanks.

______a. Transportation of food and oxygen to body cells

______b. Aid in removing adipose tissues

______c. Aid in control of body temperature

______d. Regulation of menstruation

______e. Maintenance of homeostasis

______f. Distribution of hormones and antibodies

______g. Assistance in cleansing eustachian tubes

______h. Transportation of waste products to excretory organs

3. Match structures of the heart to their functions. Write the correct numbers in the blanks.

______a. Middle and thickest layer; the muscle layer

______b. Receives oxygenated blood from the lungs

______c. Thin-walled space that receives venous blood as it returns from the body

______d. Very smooth layer of cells that lines the inside of the heart and forms the valves

______e. Thickest-walled space of the heart; receives blood from the left atrium and pumps it to the rest of the body through the arteries

1. Left ventricle
2. Endocardium
3. Myocardium
4. Left atrium
5. Right atrium

_____f. Covering of the heart; double membrane that secretes fluid which provides lubrication for the heart action, preventing friction

_____g. Between the left ventricle and the aorta; prevents return of the blood to the left ventricle

_____h. Between the right ventricle and the pulmonary artery which leads to the lungs; prevents blood from returning to the right ventricle

_____i. Thicker-walled space that receives the blood from the right atrium and pumps it into the lungs

_____j. Closes to prevent blood from returning to the left atrium when the left ventricle begins its contractions

_____k. Closes to prevent any blood from flowing back into the right atrium when the right ventricle begins pumping

6. Pulmonary semilunar
7. Tricuspid
8. Right ventricle
9. Aortic semilunar
10. Pericardium
11. Bicuspid or mitral

4. Describe the blood supply to the heart.

5. Distinguish between the structures of the blood vessels. Write an "A" before arteries, a "C" before capillaries, and a "V" before veins.

_____a. Have less muscle tissue; are equipped with one-way valves which permit the blood to flow in only one direction

_____b. Carry blood from the pumping chambers (ventricles) to the organs

_____c. Have a single layer of endothelial cells which forms a tube barely large enough to permit passage of blood cells _____d. Transport blood back to the heart under low pressure

_____e. Have the thickest walls of all blood vessels; are very muscular; walls have three layers of muscles with central layer of muscular tissue thickest

_____f. Transport materials necessary to life of cells through walls into tissues; waste products are absorbed from tissues

6. Describe the physiology of the heart.

a. Cardiac cycle--____

____

____

____

____

b. Nerve control--____

____

____

____

____

c. Conduction system--____________________________________

____

____

____

____

d. Heart sounds and murmurs--______________________________

____

____

____

____

7. Arrange in order the process of circulation of blood. Write a "1" in front of the origin of circulation, a "2" in front of the second destination, and so on.

a. Systemic (entire body)

_____1) Venules

_____2) Arteries

_____3) Inferior or superior vena cava

_____4) Left ventricle

_____5) Capillaries

_____6) Veins

_____7) Arterioles

_____8) Right atrium

_____9) Aorta

b. Pulmonary (lungs)

_____1) Capillaries

_____2) Pulmonary vein

_____3) Pulmonary artery

_____4) Arterioles

_____5) Left atrium

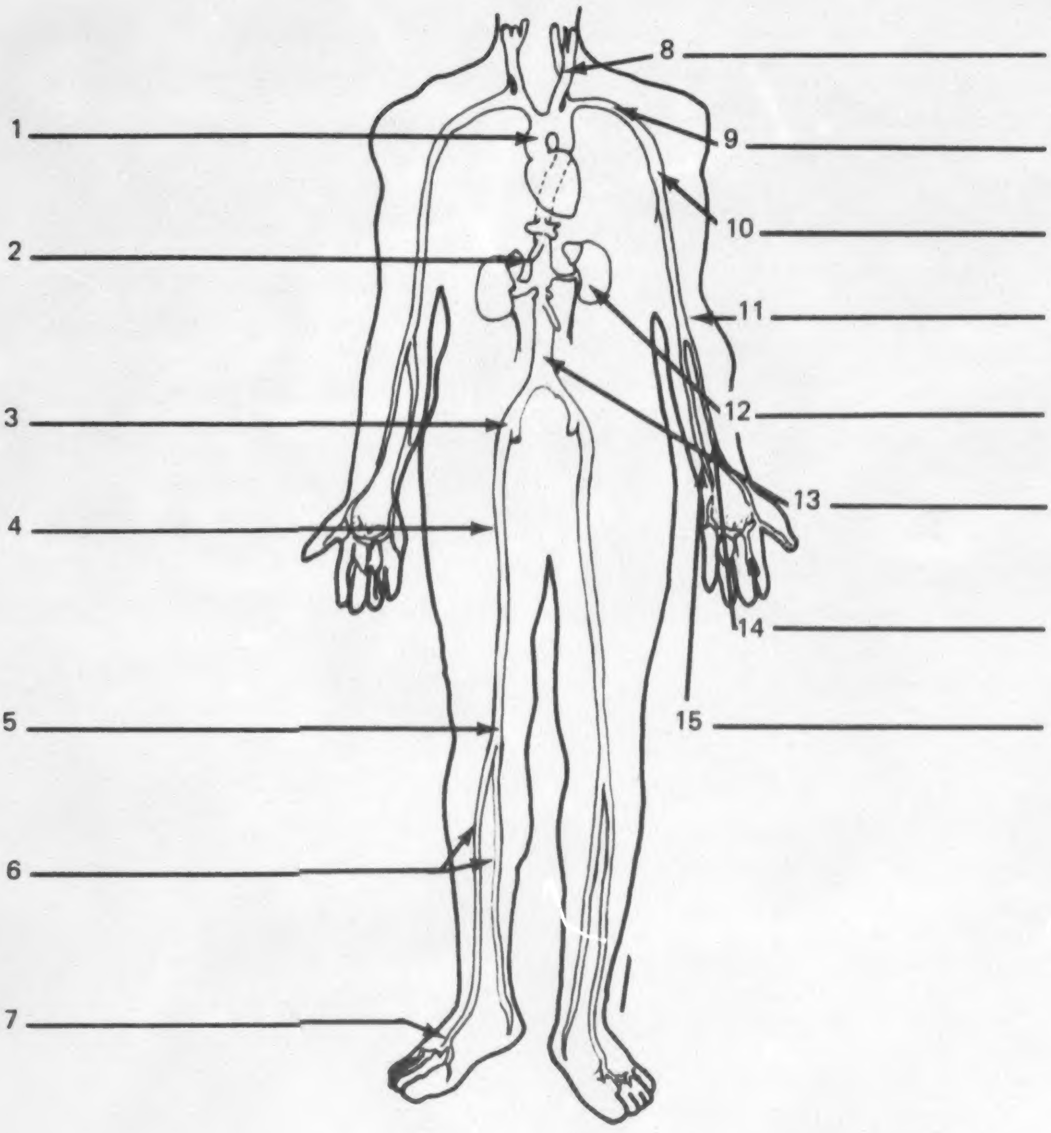
_____6) Venules

_____7) Right ventricle

8. Identify the principal arteries and veins. Write the correct answers in the blanks.

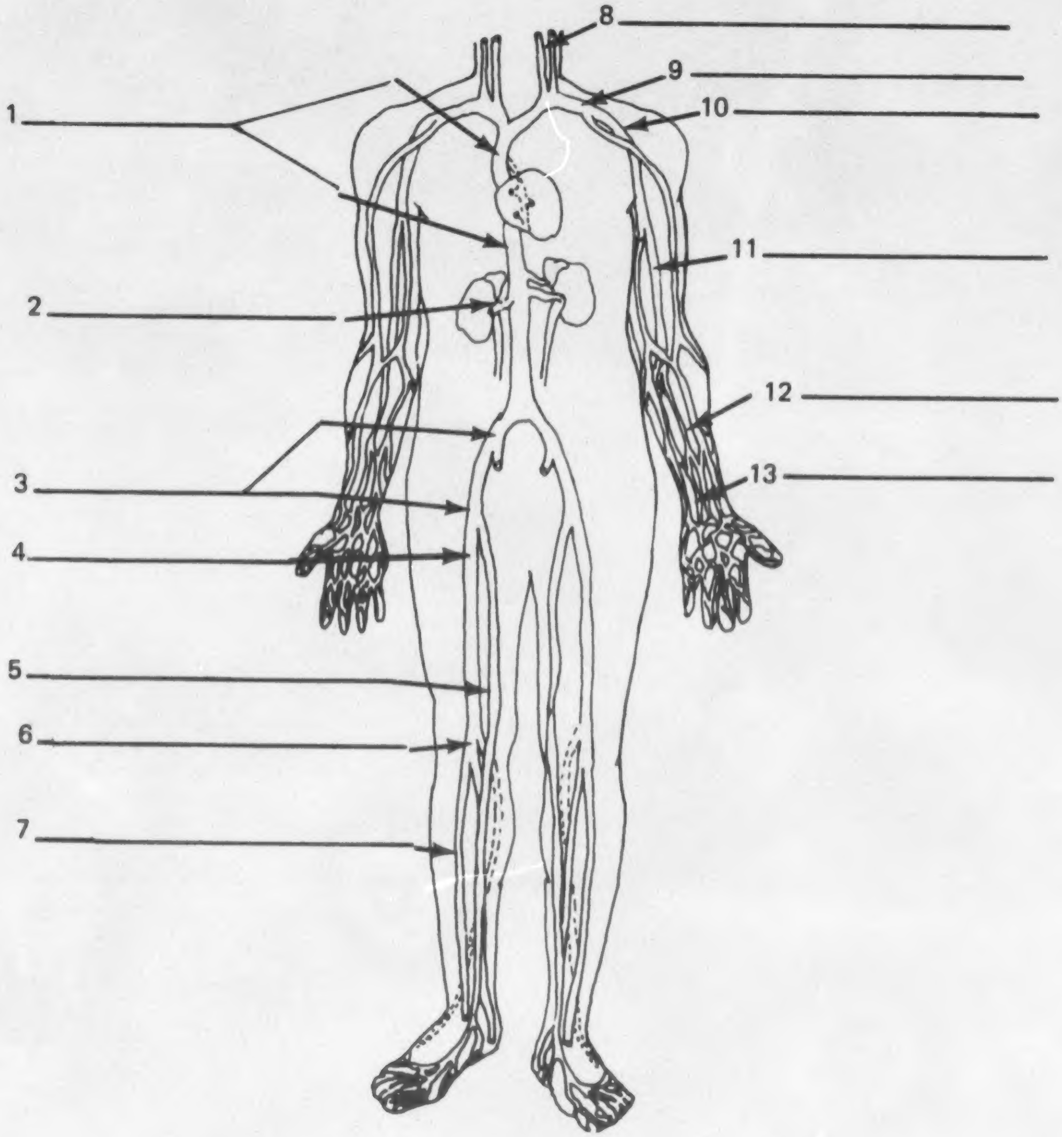
a. Arteries

Aorta
Mesenteric
Iliac
Femoral
Popliteal
Carotid
Axillary
Renal
Radial
Tibial
Subclavian
Brachial
Abdominal aorta
Ulnar
Dorsal pedis

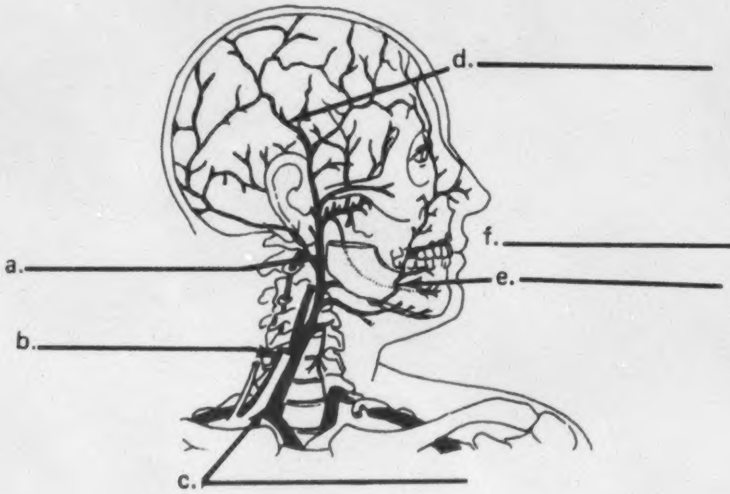


b. Veins

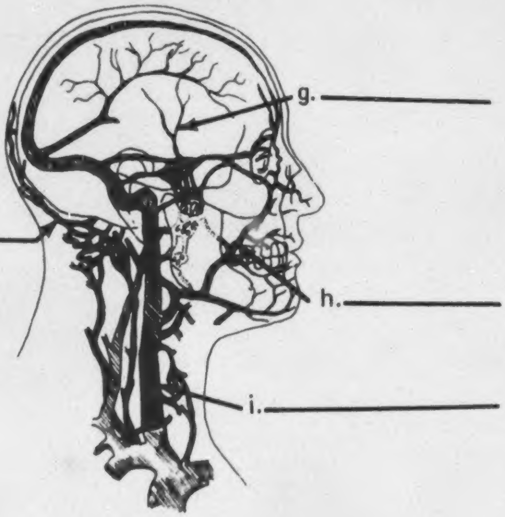
Vena Cava (superior and inferior)
Renal
Iliac
Popliteal
Tibial
Jugular
Axillary
Radial
Femoral
Subclavian
Brachial
Ulnar
Saphenous


1
2
3
4
5
6
7
8
9
10
11
12
13

9. Label the vessels that supply blood to the head. Some answers may be used more than once.



ARTERIES



VEINS

10. List in order the process of portal circulation.

a. ____________________

____

b. ____________________

____

c. ____________________

____

11. Describe the lymphatic system.

____

____

____

____

____

____

____

12. Select from the following list functions of the spleen. Mark an "X" in the correct blanks.

______a. Filters out dead blood cells and cancer cells

______b. Produces progesterone

______c. Encourages follicle growth

______d. Manufactures lymphocytes

______e. Stores blood

______f. Manufactures vitamin D

______g. Produces antibodies

______h. Destroys old, red blood cells

______i. Filters out nitrogenous wastes

______j. Secretes insulin

______k. Destroys bacteria

13. Match terms associated with vital signs to the correct definitions. Write the correct numbers in the blanks.

______a. Sudden drop from pyrexia to normal body temperature

______b. Beat of the heart as felt through the walls of the arteries

______c. Below normal body temperature

______d. Elevation of body temperature above normal

______e. Uneven intervals between pulse or heartbeats

______f. Feverish; pertaining to a fever

______g. One that rises several degrees above normal, then drops a little, but does not reach normal body temperature

______h. One that alternates between fever and normal or subnormal body temperature

______i. High blood pressure

______j. Record of electrical activity of the heart

______k. Pressure at its lowest when the heart is relaxed, the diastole of the heart

1. Febrile
2. Arrhythmia
3. Pulse
4. Remittent fever
5. Crisis
6. Hypothermia
7. Pyrexia
8. Diastolic pressure
9. Hypertension
10. Electrocardiogram (EKG or ECG)
11. Intermittent fever

______ l. Pressure at its peak during the contraction or systole of the heart

______ m. Difference between pulse counts taken simultaneously at two sites, usually radial and apical pulses

______ n. Difference between systolic and diastolic pressure

______ o. Heart rate consistently above normal

______ p. Breathing; tne inspiration and expiration of air involving the muscles of the chest and abdomen

______ q. Abnormally slow heart rate

______ r. Balance between heat produced and heat lost by the body

______ s. Heart rate counted at the apex of the heart by using a stethoscope

______ t. Force the blood exerts against a vessel wall as the heart beats

______ u. Low blood pressure

______ v. Gradual return from pyrexia to normal body temperature

______ w. Distinct series of sounds heard in listening to the blood pressure, including systolic and diastolic

12. Pulse pressure
13. Hypotension
14. Pulse deficit
15. Bradycardia
16. Systolic pressure
17. Body temperature
18. Apical pulse
19. Lysis
20. Tachycardia
21. Respiration
22. Blood pressure
23. Korotkoff method

14. State reasons why knowledge of vital signs is important.

a. ____

____

____

b. ____

____

____

c. ____

____

____

d. ______________________________

____

____

15. Describe regulation of body temperature.

____

____

____

____

16. Distinguish between indications for specific temperature sites. Write an "O" for oral temperature site and an "R" for rectal temperature site in the blanks.

_____a. Patients with rectal or perineal surgery

_____b. Patients with oral or nasal surgery, infection, or disease

_____c. Patients with diarrhea

_____d. Patients with confusion, mental illness, senility, or patients who are unconscious

_____e. Patients with rectal distention from fecal material

_____f. Patients who have difficulty in breathing

_____g. Patients to whom oxygen is being administered

_____h. Patients with extreme weakness

17. Complete the following chart showing temperature ranges, conditions, and sites where taken. Write the correct answer in the blanks.

TEMPERATURE RANGES	CONDITION	SITES
a. ____________	Normal	Oral
99.6°F (37.5°C)	Normal	b. ____________
97.6°F (36.4°C)	c. ____________	Auxillary

18. List factors that influence body temperature.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

g. ______________________________

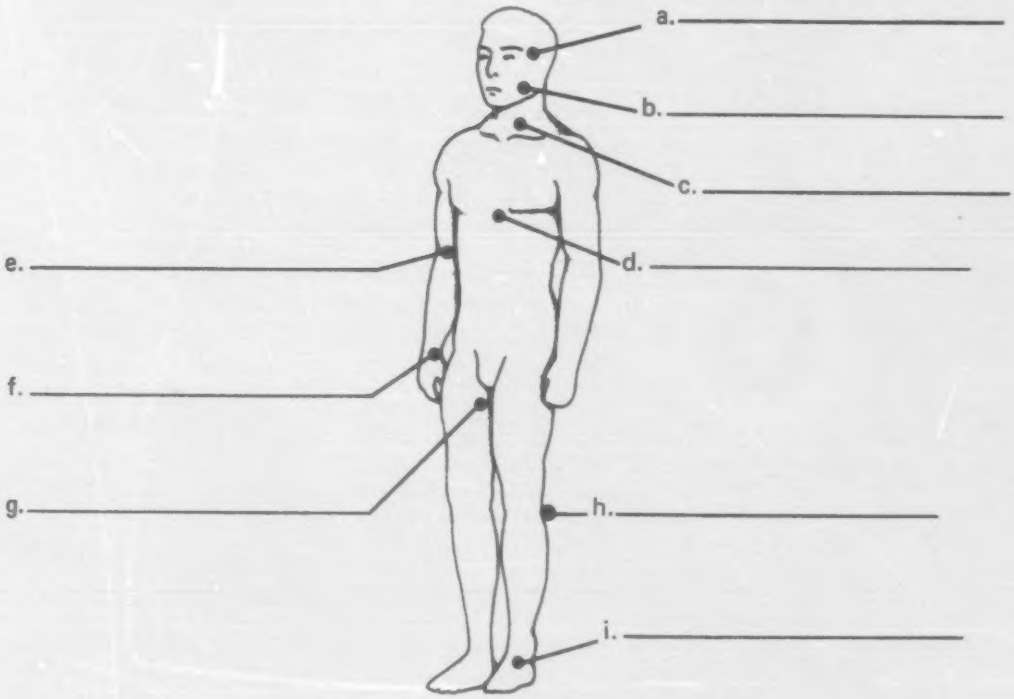
h. ______________________________

i. ______________________________

j. ______________________________

k. ______________________________

19. Label sites where pulse may be taken.



20. Match average pulse rates to specific groups. Write the numbers in the correct blanks.

_____ a. 60-70 beats per minute

_____ b. 72-80 beats per minute

_____ c. 72-90 beats per minute

_____ d. 80-120 beats per minute

_____ e. 110-130 beats per minute

1. Children age one to seven
2. Children over age seven
3. Women
4. Infants
5. Men

21. Describe criteria used when assessing pulse and respiration rates.

a. Rate-- ____________________

b. Rhythm-- ____________________

c. Quality-- ____________________

22. List factors that influence heart and pulse rate. Write an "X" in the correct blanks.

a. ____________________

b. ____________________

c. ____________________

d. ____________________

e. ____________________

f. ____________________

g. ____________________

23. List factors that affect respiration.

a. ____________________

b. ____________________

c. ____________________

d. ____________________

e. ____________________

f. ____________________

g. ____

h. ____

i. ____

24. Match terms to describe respiration to their correct definitions. Write the correct numbers in the blanks.

_____a. Temporary cessation of breathing

_____b. Uneven respirations from strong to weak with intervals of apnea

_____c. Breathing accomplished chiefly by rib muscles

_____d. Bubbling or rattling sounds caused by mucus in the air passages as in bronchitis or pneumonia

_____e. Normal breathing

_____f. Breathing possible only when person sits or stands in an erect position

_____g. Difficult or labored breathing

_____h. Very deep, gasping type of respiration associated with diabetic coma

1. Eupnea
2. Dyspnea
3. Apnea
4. Orthopnea
5. Cheyne-Stokes
6. Rales
7. Costal
8. Kusshmaul

25. List factors affecting blood pressure.

a. ____

b. ____

c. ____

d. ____

e. ____

f. ____

g. ____

h. ____

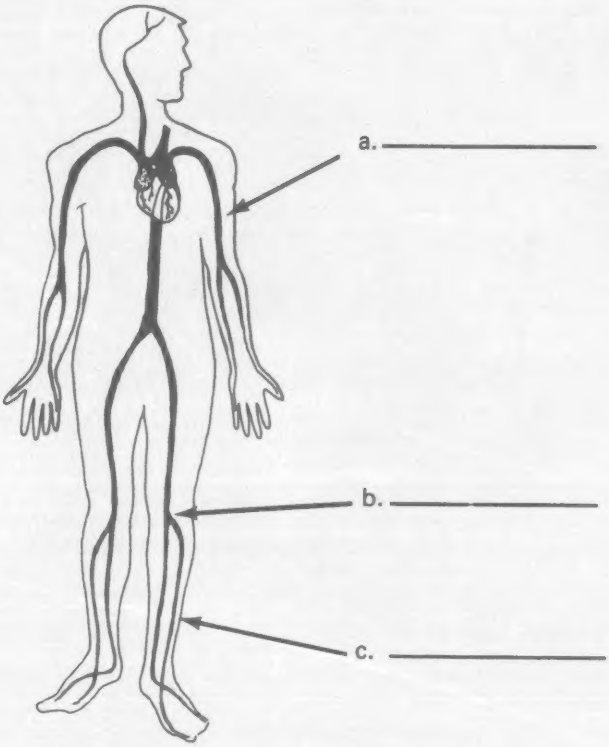
i. ____

j. ____

k. ____

l. ____

26. Label sites for taking blood pressure.



27. Describe criteria to observe when assessing vital signs.

____

____

____

____

____

____

____

____

28. Match terms associated with application of heat and cold to the correct definitions. Write the correct numbers in the blanks.

______a. Freezing or the effect of freezing a part of the body

______b. Rays produced by the sun which provide heat; can be produced with special equipment

______c. Disease caused by a defect in the chemical processes of the body cells

______d. Cloth, wet or dry, folded and applied firmly to a part of the body

______e. Death of a cell or group of cells

______f. Abnormal accumulation of blood in a body part

______g. Invisible rays produced by the sun or with special equipment which cause tanning of the skin, kill bacteria, and aid in metabolism of vitamin D

______h. Formation or discharge of pus

______i. Pertaining to the whole body rather than one of its parts

______j. Deliberate reduction of temperature in all or part of the body

______k. Introduction of dry or moist air or vapor into the lungs for therapeutic purposes

1. Suppuration
2. Metabolic disease
3. Necrosis
4. Hypothermia treatment
5. Ultraviolet rays
6. Infrared rays
7. Compress
8. Inhalation
9. Systemic
10. Frostbite
11. Congestion

29. Distinguish between local effects of heat and cold. Write an "H" for heat and a "C" for cold in the correct blanks.

______a. Decrease in inflammation

______b. Lessening of bleeding

______c. Constriction of blood vessels in area causing decrease of blood supply to part

______d. Reduction of pain

______e. Decrease in suppuration

______f. Dilation of blood vessels in area causing increase in blood supply

______g. Increase in suppuration

______h. Cooling of the part and eventually the body _____i. Prevention of or decrease of swelling

_____j. Increase or decrease in swelling, depending upon etiology and stage of diseases or injury

_____k. Reduction of sensation and lessening of pain with prolonged exposure

30. Distinguish between systemic effects of heat and cold. Write an "H" for heat and a "C" for cold in the correct blanks.

_____a. Drowsiness

_____b. Slowing of metabolism from prolonged application

_____c. Reduction of blood loss

_____d. Decrease in available blood supply to other parts of the body which may result in weakness, dizziness, or fainting

_____e. Decrease in tissue stress as a result of trauma

_____f. Sense of well-being due to relief of pain

31. Distinguish between forms of heat. Write a "DH" for dry heat and an "MH" for moist heat in the correct blanks.

_____a. Infrared and ultraviolet lamps

_____b. Circulating aqua pad/K-pad

_____c. Heat lamp

_____d. Sitz bath

_____e. Electric pad

_____f. Heat cradle

_____g. Warm, moist packs or compresses

_____h. Hot water bottle

_____i. Chemical hot pack

32. Distinguish between forms of cold. Write a "DC" for dry cold and an "MC" for moist cold in the correct blanks.

_____a. Cool or tepid sponge bath

_____b. Chemical cold pack

_____c. Ice bag

_____d. Cool vapor inhalations

_____e. Ice collar

_____f. Circulating aqua pad/K-pad

33. List temperature ranges used for applications of heat and cold.

    a. Heat

        1) ____________________

        2) ____________________

        3) ____________________

    b. Cold

        1) ____________________

        2) ____________________

        3) ____________________

        4) ____________________

34. Trace a drop of blood through the heart.

35. Assess vital signs.

36. Read Fahrenheit and Celsius thermometers.

37. Convert Fahrenheit and Celsius readings.

38. Chart temperature, pulse, respirations, and blood pressure.

39. Demonstrate the ability to:

    a. Take oral temperature.

    b. Take rectal temperature.

    c. Take axillary temperature.

    d. Clean thermometers.

    e. Take pulse and respirations.

    f. Take apical/radial pulse.

    g. Take blood pressure.

    h. Use a hot water bottle.

    i. Use an aqua pad/K-pad.

j. Use an electric heating pad.

k. Administer a chemical hot pack.

l. Use a heat lamp.

m. Use a heat cradle.

n. Apply warm, wet compresses.

o. Use an ice bag or ice collar.

p. Apply a chemical cold pack.

q. Apply a cold, moist pack.

r. Give a cool or tepid sponge bath.

(NOTE: If activities 34-39 have not been finished before the test, ask the instructor when they should be completed.)

CIRCULATORY SYSTEM AND VITAL SIGNS
UNIT IX

ANSWERS TO TEST

1. a. 5
   b. 6
   c. 4
   d. 3
   e. 1
   f. 8
   g. 11
   h. 10
   i. 7
   j. 9
   k. 2
   l. 12
   m. 16
   n. 13
   o. 15
   p. 14
   q. 17
   r. 18

2. a, c, e, f, h

3. a. 3
   b. 4
   c. 5
   d. 2
   e. 1
   f. 10
   g. 9
   h. 6
   i. 8
   j. 11
   k. 7

4. Description should include:

   a. Coronary arteries that branch off the aorta just above the aortic semilunar valve supply blood to the myocardium

   b. Left branch supplies blood to the left atrium and ventricle; right branch supplies blood to the right side

   c. Coronary arteries can increase or decrease the blood supply as needed

   d. Coronary arteries become smaller as they enter the heart wall and nourish the tissue through capillaries, then drain into venules and coronary veins that carry blood to right atrium

5. a. V
   b. A
   c. C
   d. V
   e. A
   f. C

6. Descriptions should include:

   a. Cardiac cycle

      1) Atria contract and ventricles rest

      2) Ventricles contract; atria relax and fill with blood

   b. Nerve control

      1) Heart contracts rhythmically even though its outside nerve supply may be interrupted or destroyed

      2) Nerve supply comes from part of the autonomic nervous system, which has an accelerating and braking control

   c. Conduction system

      1) Contraction begins in the S-A node, then travels as the wave passes through the atrial muscles, causing them to contract

      2) A-V node is then stimulated and transmits the wave to the Bundle of His, which stimulates the ventricular muscles, causing them to contract

   d. Heart sounds and murmurs

      1) Normal heart sounds are usually described by two syllables, lubb and dupp

      2) First or systolic sound (lubb) is due to closure of the cuspid valves and contraction of the ventricles

      3) Second or diastolic sound (dupp) is due to closure of the semilunar valves

7. a. Systemic (entire body)

      1) 6

      2) 3

      3) 8

      4) 1

      5) 5

      6) 7

      7) 4

      8) 9

      9) 2

- b. Pulmonary (lungs)
    - 1) 4
    - 2) 6
    - 3) 2
    - 4) 3
    - 5) 7
    - 6) 5
    - 7) 1

8. a. Arteries
    - 1) Aorta
    - 2) Mesenteric
    - 3) Iliac
    - 4) Femoral
    - 5) Popliteal
    - 6) Tibial
    - 7) Dorsal pedis
    - 8) Carotid
    - 9) Subclavian
    - 10) Axillary
    - 11) Brachial
    - 12) Renal
    - 13) Abdominal aorta
    - 14) Radial
    - 15) Ulnar

- b. Veins
    - 1) Vena cava (superior and inferior)
    - 2) Renal
    - 3) Iliac

4) Femoral

5) Saphenous

6) Popliteal

7) Tibial

8) Jugular

9) Subclavian

10) Axillary

11) Brachial

12) Radial

13) Ulnar

9. a. Occipital

b. Vertebral

c. Carotid

d. Temporal

e. Facial

f. Occipital

g. Temporal

h. Facial

i. Jugular

10. a. Veins from the stomach, intestine, spleen, and pancreas empty into one vessel, the portal vein

b. Portal vein then carries the blood, loaded with digested food, to the liver, which extracts food materials for storage and modification including removal of toxins

c. Blood leaves the liver through the hepatic veins which empty into the inferior vena cava

11. Description should include:

a. Network of very small lymph capillaries collects excess tissue fluid and certain waste products from the body cells

b. Lymph fluid resembles plasma in composition, but contains less protein

c. Lymph drainage from the intestinal area may be milky in appearance due to the high fatty contents after a meal

d. Lymph capillaries empty into larger vessels and finally drain into the thoracic duct and the right lymphatic duct

e. Two main lymphatic channels empty into the veins at the base of the neck where the lymph mixes with the blood plasma

12. a, d, e, g, h, k

13. a. 5
b. 3
c. 6
d. 7
e. 2
f. 1
g. 4
h. 11
i. 9
j. 10
k. 8
l. 16
m. 14
n. 12
o. 20
p. 21
q. 15
r. 17
s. 18
t. 22
u. 13
v. 19
w. 23

14. a. Change in one of the vital signs may affect the others

b. Deviation from the "normal" rates usually indicates presence of a disease or infection

c. Variations of certain vital signs are so typical of some diseases or stages of diseases that diagnosis and medical care plan can be dependent upon these symptoms

d. Accurate measurement of the vital signs is an important aid in the evaluation of a patient's condition

15. Description should include:

a. Heat is produced by oxidation of digested food and by muscle and gland activity; some heat may be obtained from the environment

b. Heat is lost through respirations, excreta, cold beverages, and cold foods which are consumed; the greatest amount of heat loss is through the skin

16. a. O
b. R
c. O
d. R
e. O
f. R
g. R
h. R

17. a. 97.6°-99°F (36.4°-37.2°C)
    b. Rectal
    c. Normal
18. a. External environment
    b. Internal environment
    c. Sex
    d. Age
    e. Emotions
    f. Time of day
    g. Exercise and digestive processes
    h. Infection or disease
    i. Hot or cold foods
    j. Mouth breathing
    k. Smoking
19. a. Temporal
    b. Facial
    c. Carotid
    d. Apical
    e. Brachial
    f. Radial
    g. Femoral
    h. Popliteal
    i. Pedal
20. a. 5
    b. 3
    c. 2
    d. 1
    e. 4

21. Descriptions should include:
    a. Rate--Number of pulse, heartbeats, or respirations per minute
    b. Rhythm--Regularity or irregularity of the pulse, heartbeat, or respirations
    c. Quality--Volume; strength of pulse beats

22. a. Activity
    b. Emotions
    c. Some drugs
    d. Smoking
    e. Endocrine disturbances
    f. Elevated temperature
    g. Disorders of the heart and circulatory system

23. a. Age
    b. Sex
    c. Exercise
    d. Pain
    e. Fever
    f. Emotions
    g. Heart disease
    h. Respiratory disease
    i. Drugs

24. a. 3   e. 1
    b. 5   f. 4
    c. 7   g. 2
    d. 6   h. 8

25. a. Condition of the artery and arteriole walls
    b. Rate of heartbeat
    c. Exercise
    d. Emotions

e. Sex

f. Hemorrhage

g. Shock

h. Drugs

i. Endocrine activity

j. Altitude

k. Smoking

l. Site where taken

26. a. Brachial artery

b. Popliteal artery

c. Tibial artery

27. Description should include:

a. Begin with a systematic approach

b. Take vital signs as often as necessary

c. Interpret and analyze the vital signs to see if they have a relationship to changes in patient's condition, laboratory results, or changes in symptoms

d. Vital signs should be taken by the person caring for the patient for the entire shift

28. a. 10

b. 6

c. 2

d. 7

e. 3

f. 11

g. 5

h. 1

i. 9

j. 4

k. 8

29. a. C

b. C

c. C

d. H

e. C

f. H

g. H

h. C

i. C

j. H

k. C

30. a. H

b. C

c. C

d. H

e. C

f. H

31. a. DH

b. DH

c. DH

d. MH

e. DH

f. DH

g. MH

h. DH

i. DH

32. a. MC

b. DC

c. DC

d. MC

e. DC

f. DC

33. a. Heat

1) Warm or neutral--93°-98°F (34°-37°C)

2) Hot--98°-105°F (36.6°-41°C)

3) Very hot--105°-115°F (41°-46°C)

b. Cold

1) Tepid--80°-93°F (28°-34°C)

2) Cool--64°-80°F (18.3°-27.5°C)

3) Cold--50°-65° (10°-18.3°C)

4) Very cold--Below 50°F (10°C)

34. Evaluated to the satisfaction of the instructor

35. Evaluated to the satisfaction of the instructor

36. Evaluated to the satisfaction of the instructor

37. Evaluated to the satisfaction of the instructor

38. Evaluated to the satisfaction of the instructor

39. Performance skills evaluated to the satisfaction of the instructor

HEMATOLOGY
UNIT X

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of hematology to distinguish between normal and abnormal blood values. This knowledge will be evidenced by completion of assignment sheet, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with hematology to the correct definitions.
2. Describe functions of the blood.
3. Select from a list physical characteristics of blood.
4. Select from a list principal components of blood plasma.
5. Distinguish between characteristics of normal blood cells.
6. Describe the mechanism of blood clotting.
7. Complete a chart of blood types.
8. State facts to remember when determining blood types to be used for transfusions.
9. Select from a list reasons for transfusions.
10. Describe the Rh factor.
11. Match routine blood studies to the correct descriptions.
12. List less common blood tests done for more specific diagnoses.
13. Match blood cells to the correct test values found in adults.
14. Recognize and record abnormalities noted in blood studies.

HEMATOLOGY
UNIT X

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

  A. Provide students with objective sheet.

  B. Provide students with information sheet and make transparencies.

  C. Discuss unit objective and specific objectives.

  D. Discuss information sheet.

  E. Take a field trip to a hospital or clinical laboratory to view different types of equipment and to see how various blood study tests are done.

  F. Visit a Red Cross blood center or assist in a local blood drive.

  (NOTE: Students may be asked to take vital signs, do capillary sticks, record information, or assist with the snack area provided for the donor after his or her blood is taken.)

  G. Provide assignment sheet.

  H. Discuss and complete assignment sheet.

  I. Give test.

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

  C. Transparency masters

    1. TM 1--Composition of Blood

    2. TM 2--Erythrocytes

    3. TM 3--Ameboid Action of Leukocytes

    4. TM 4--White Blood Cells

    5. TM 5--Blood Clot

    6. TM 6--Blood Typing

  D. Assignment Sheet #1--Recognize and Record Abnormalities Noted in Blood Studies

E. Test

F. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study*. Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/ Curriculum and Instructional Materials Center, 1974.

B. Sloan, Jamee. *Health Service Careers*. Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1979.

C. Thomas, Virginia. *Life Sciences for Nursing and Health Technologies*. Long Beach, California: Technicourse, 1977.

IV. Film--*Heart and Circulatory System*. Color, 11 min., 1972, Films, Inc. Available from Films, Inc., Sales Office, 733 Green Bay Road, Wilmette, Illinois 60091.

(NOTE: This film is available on a free-loan basis *only* to Oklahoma teachers from the Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order from the address above.)

V. Filmstrips:

(NOTE: The following filmstrips are available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.)

A. *Management of Blood Transfusions.*

B. *Basic Hematology.*

C. *Introduction to the Blood.*

D. *Normal Hemostasis.*

E. *White Blood Cells: Defenders Against Infection.*

VI. Polar motion spinner and transparencies--Available from American Animation, Inc., Six East Spruce Street, Box 335, Moorestown, New Jersey 00157.

HEMATOLOGY
UNIT X

INFORMATION SHEET

I. Terms associated with hematology

A. Hematology--Study of blood

(NOTE: *Hemo-* means blood.)

B. Homeostasis--State of chemical balance between the cell and its environment

C. Gamma globulin--Antibody fraction of blood

D. Erythrocytes--Red blood cells, originating in red bone marrow, that transport oxygen to the cells and carbon dioxide from the cells

(NOTE: *Erythro-* means red; *cyte* means cell.)

E. Leukocytes--White blood cells formed in red bone marrow, spleen, and other lymph tissues that aid in fighting infection

Examples: Granulocytes, agranulocytes

(NOTE: *Leuko-* means white.)

F. Corpuscles--Blood cells

(NOTE: *Corpuscles* means little bodies.)

G. Granulocytes--White blood cells that have a lobed nucleus and granules in the cytoplasm

H. Agranulocytes--White blood cells that have a round nucleus and no granules in the cytoplasm

I. Megakaryocyte--Large nucleus cell

(NOTE: *Mega* means large; *karyon* means nucleus.)

J. Pathogen--Disease-producing microorganism

K. Coagulation--Clotting of blood

L. Formed elements--Cells of the blood

M. Plasma--Liquid portion of the blood

N. Transfusion--Injection of the blood of one person into the blood vessels of another

O. Infusion--Liquid substance introduced into the body through a vein for therapeutic purposes

INFORMATION SHEET

P. Agglutination--Clumping of blood cells when incompatible bloods are mixed

Q. Hemolysis--Destruction of red blood cells with the liberation of hemoglobin which diffuses into the surrounding fluid

R. Hemorrhage--Abnormal discharge of blood, either externally or internally

S. Lipid--Any of a group of fat or fatlike substances which are insoluble in water

T. Anemia--Deficiency of red blood cells or hemoglobin or both

U. Shock--Depression of the body functions due to failure of the circulatory system

V. Bone marrow puncture--Insertion of a hollow needle into the marrow cavity of a flat bone to withdraw a sample of bone marrow

W. Anticoagulant--An agent which prevents or delays the formation of blood clots

X. Thrombus--Clot formed in a blood vessel

Y. Embolus--Clot which has moved from where it was formed

Z. Electrolyte--Solution that conducts electricity by its ions

AA. Hemostasis--Arrest of bleeding

II. Functions of the blood

A. Transports needed elements and waste

1. Carries oxygen from the lungs to the tissues, and carbon dioxide from the tissues to the lungs
2. Carries nutrients from the digestive tract to the tissues, and waste products from tissues to the excretory organs
3. Carries hormones from the organs to various tissues and cells of the body
4. Moves heat generated by the muscles to other parts of the body

B. Maintains homeostasis

1. Helps to maintain acid-base balance
2. Helps to maintain electrolyte balance
3. Helps to maintain fluid balance

INFORMATION SHEET

    4. Helps to maintain body temperature

  C. Combats infection

    1. Some cells fight infection

    2. Some components help maintain immunity to disease

III. Physical characteristics of blood

  A. Blood makes up approximately seven percent of body weight

  B. Average volume of blood in an adult is between four and five liters

  C. Normal pH of blood is slightly alkaline, 7.35 to 7.45

  D. Blood consists of 55 percent plasma, 45 percent formed elements

IV. Principal components of blood plasma (Transparency 1)

  A. Water

  (NOTE: Water comprises about 90 percent of the blood plasma and acts as a carrier for the remaining 100 or so components.)

  B. Blood proteins

  (NOTE: These comprise about seven percent of the blood plasma.)

  Examples: Amino acids, antibody fractions, blood-clotting proteins, serum albumin

  C. Carbohydrates, primarily glucose

  D. Lipids

  E. Mineral salts

  (NOTE: These are needed for bone formation, hormone production, red cell production, and acid-base balance.)

  F. Waste products

  G. Hormones and vitamins

  H. Gases (oxygen, nitrogen, and carbon dioxide)

  I. Heparin

  (NOTE: This is an acid manufactured by the liver, which prevents clotting in the blood stream. This substance may be produced synthetically.)

INFORMATION SHEET

J. Vitamin K

(NOTE: This aids in clotting.)

V. Characteristics of normal blood cells (Transparencies 2, 3, and 4)

A. Erythrocytes

(NOTE: These are also called RBC, red blood cells, or red corpuscles, and are found in the red bone marrow, spleen, and other lymphatic tissue.)

1. Transport oxygen to cells and carbon dioxide from cells
2. Are minute, disc-shaped cells
3. Have an average life span of 120 days
4. Remain in bloodstream unless a vessel is cut or ruptured

B. Leukocytes

(NOTE: These are also called WBC, white blood cells, white corpuscles, or tissue.)

Examples: Granulocytes with lobed nucleus and granules in the cytoplasm, agranulocytes with simple nucleus and no granules

1. Fight infection
2. Are colorless
3. Vary in shape and size
4. Have an average life span of nine days
5. May move out of the blood vessels by passing between cells of the vessel walls

C. Platelets

(NOTE: These cells are found in the red bone marrow; they are also called thrombocytes and aid in coagulation of blood.)

1. Are irregular in size and shape
2. Are very fragile and break easily under stress
3. Can be seen in clusters

INFORMATION SHEET

VI. Mechanism of blood clotting (Transparency 5)

(NOTE: Under most normal conditions, clotting in blood vessels does not take place because of the presence of heparin and because the linings of the vessels are smooth. Due to a blockage in the vessel, an embolus or thrombus can form.)

A. Bleeding can occur on the inside or outside of the body due to trauma or various conditions

B. Clotting of the blood begins when fragile platelets rupture and cause a complex chemical process to form fibrin, an insoluble protein

C. Fibrin then acts as a mesh network which traps the remaining components of blood to form a clot

(NOTE: Thromboplastin is necessary for the formation of a clot and is produced only when platelets break.)

VII. Blood types (Transparency 6)

(NOTE: In theory, blood can be given according to the following chart; however, blood is nearly always given to persons from the same blood group and only after cross-matching to minimize adverse reactions.)

BLOOD TYPE	CAN RECEIVE BLOOD FROM	CAN GIVE BLOOD TO
Type A (NOTE: Approximately 40 percent of all people have type A blood.)	A and O	A and AB
Type B (NOTE: Approximately 10 percent of all people have type B blood.)	B and O	B and AB
Type AB (NOTE: Approximately four percent of all people have type AB blood.)	All	AB
Type O (NOTE: Approximately 45 percent of all people have type O blood.)	O	All

INFORMATION SHEET

VIII. Facts to remember when determining blood types to be used for transfusions

A. Not all blood types are compatible and the mixing of the blood may result in hemolysis or agglutination of red cells

B. Adverse reactions to transfusion are determined largely by the type of protein in the red cells

C. Usually, a person can safely receive blood from another person but before the transfusion is given, a check for compatibility should be made

D. If a transfusion of incompatible blood is given, the person may have a serious or fatal reaction

(NOTE: This reaction could be a slight allergic reaction with hives and shortness of breath, or the patient may experience shock symptoms and die.)

IX. Reasons for transfusions

(NOTE: Blood may be given as whole packed cells, plasma, or other components, depending on the patient's need. Technology has become more sophisticated in its uses for blood in the treatment of many disorders and conditions.)

A. To replace blood lost through hemorrhage

B. To treat anemia

C. To treat shock

D. To exchange blood in certain blood disorders

E. To aid recovery as a preoperative or postoperative procedure

X. Rh factor

A. Approximately 85 percent of the population have a red blood cell protein called the Rh factor; these people are Rh positive

B. Approximately 15 percent of the population do not have this protein; these people are Rh negative

C. When Rh positive blood is given to an Rh negative person, the recipient's Rh negative blood may produce counteracting proteins, called antibodies, which destroy the red cells from the Rh positive blood; this does not happen when Rh negative blood is given to an Rh positive recipient

D. An Rh negative mother may become sensitized by proteins from an Rh positive baby

INFORMATION SHEET

E. During pregnancy following sensitization, the mother's antibodies may pass into the blood of the unborn infant and cause erythroblastosis fetalis, a destruction of red blood cells

XI. Routine blood studies

A. Complete blood count (CBC)--Measures white blood cells, red blood cells, hemoglobin, and hematocrit

(NOTE: Some CBCs will include the platelet count and other, more specific counts concerning shapes and volumes of the cells.)

B. Red blood count (RBC)--Measures total volume of red corpuscles (erythrocytes)

C. White blood count (WBC)--Measures total volume of white corpuscles (leukocytes)

D. Hemoglobin (Hgb.)--Measures the amount of oxygen-carrying protein pigment of red blood cells

E. Hematocrit (Hct.)--Volume of erythrocytes in a given volume of blood

F. Serology--Scientific study of serum

G. Blood chemistry tests--Measure levels of blood components from venous blood sample

Examples: Electrolytes, enzyme levels

XII. Less common blood tests done for more specific diagnoses

A. Platelet count

B. Blood sugar

C. Clotting time and bleeding time

D. Examination of blood for parasites

E. Bone marrow puncture

XIII. Blood cells and their test values found in adults (Assignment Sheet #1)

(NOTE: Values may differ in various institutions, depending on the type of equipment used.)

A. Erythrocytes (RBCs)--4,500,000-5,000,000

B. Leukocytes (WBCs)--5,000-10,000

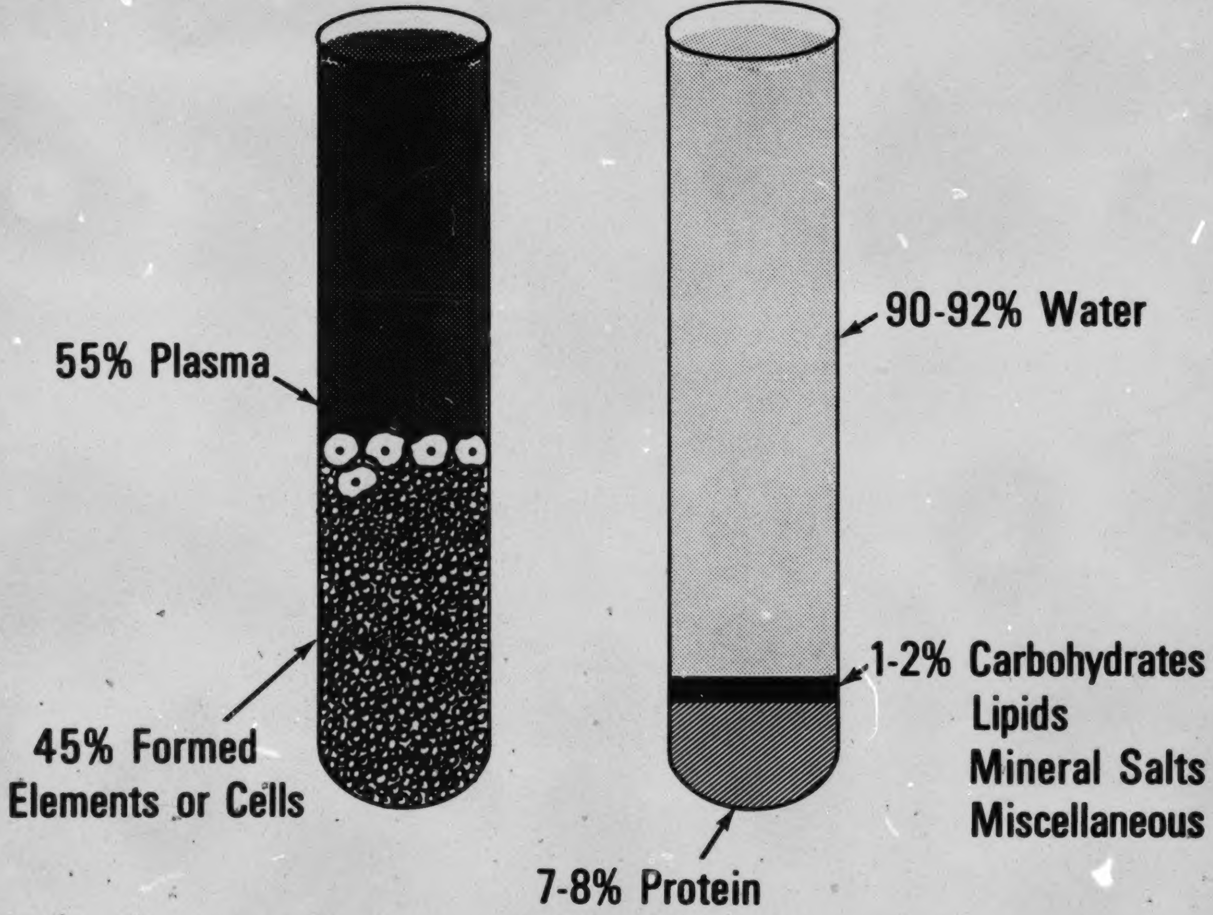
C. Platelets--200,000-400,000

INFORMATION SHEET

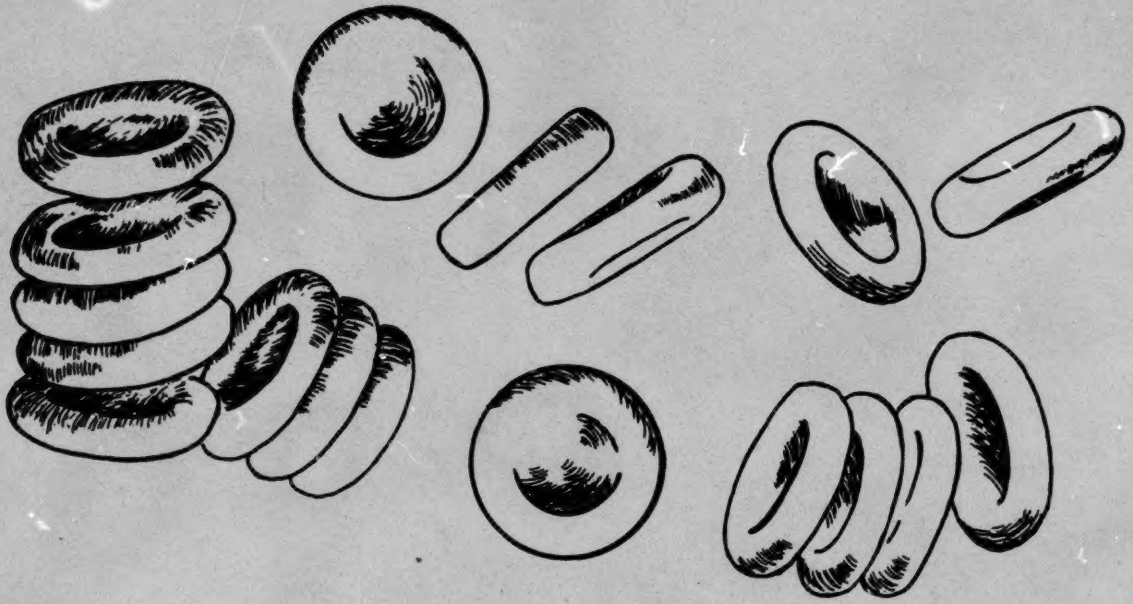
D. Hemoglobin--12-18 gm%

E. Hematocrit--38-50 percent

Composition of Blood

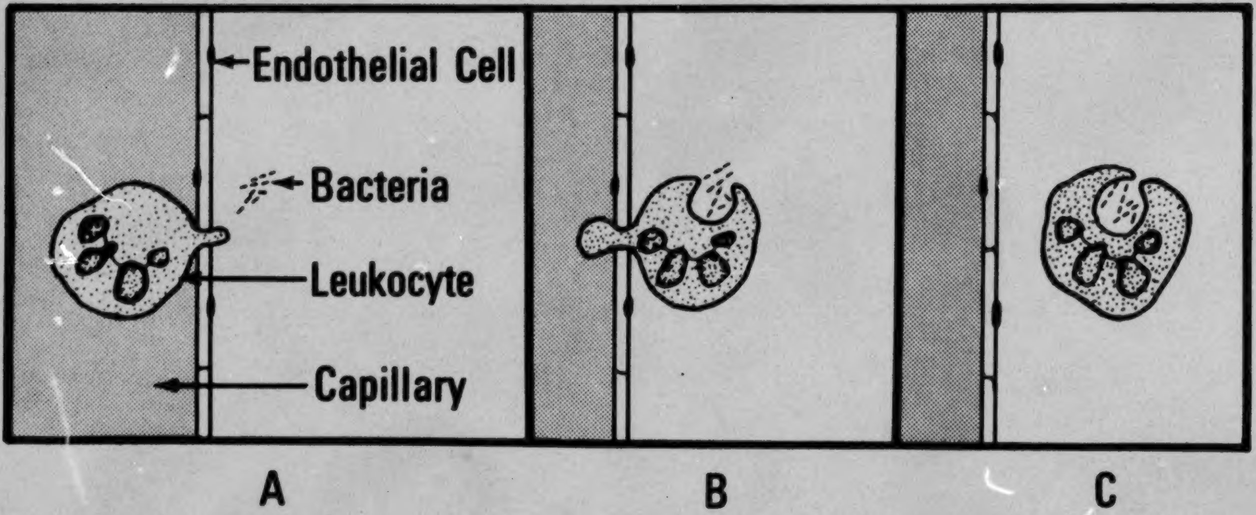

55% Plasma
45% Formed Elements or Cells
90-92% Water
1-2% Carbohydrates
Lipids
Mineral Salts
Miscellaneous
7-8% Protein

Erythrocytes



Erythrocytes viewed from various angles.
Note the concave surfaces.

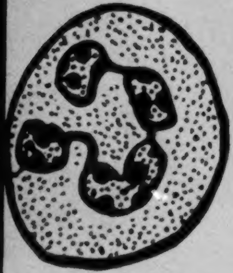
Ameboid Action of Leukocytes

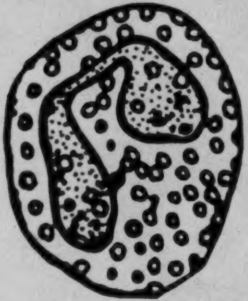

Endothelial Cell
Bacteria
Leukocyte
Capillary
A
B
C

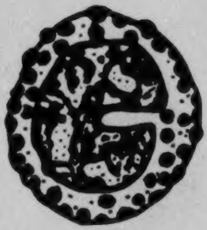
(A) A white blood cell squeezing itself through a capillary wall, in the region of an infection. (B) and (C) The white cell engulfing the bacteria (phagocytosis), part of the body's process of fighting infection.

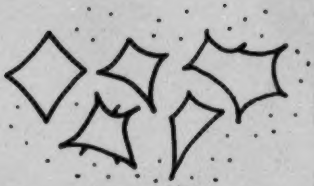
White Blood Cells

GROUP I-GRANULOCYTES
formed in red bone marrow

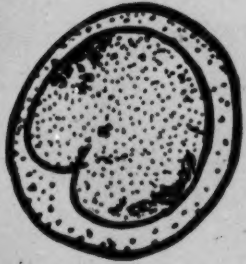

Neutrophil

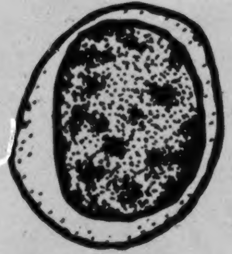

Eosinophil


Basophil

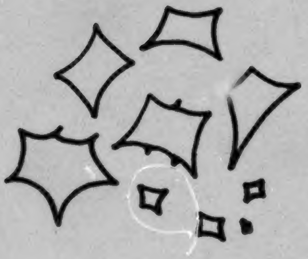

Platelets
(Thrombocytes)

GROUP II- AGRANULOCYTES
formed in lymphoid organs

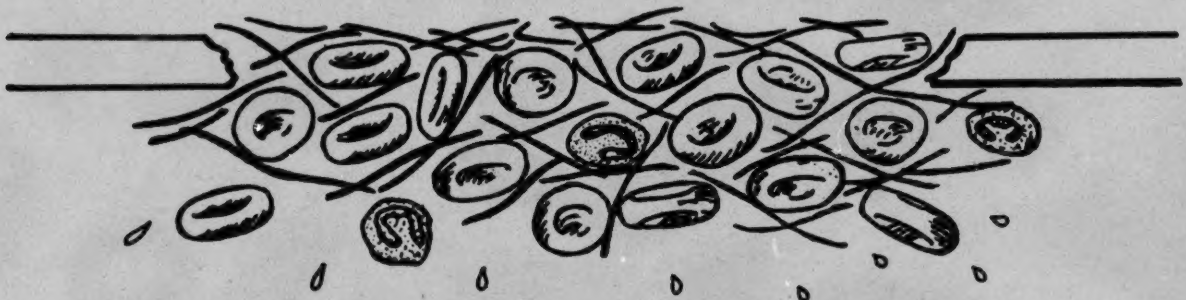

Monocyte


Lymphocyte

Blood Clot



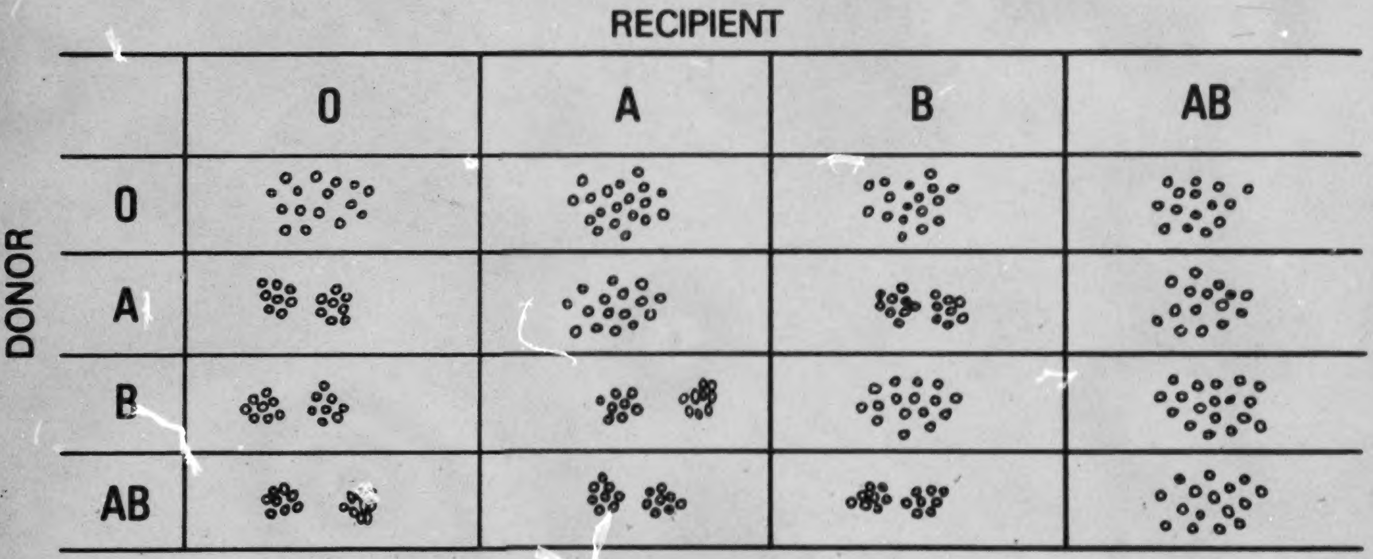
Injured blood platelets start a series of changes in substances normally dissolved in the blood producing a meshwork of solid strands called fibrin.



The fibrin forms a mesh in the wound area which traps erythrocytes and leukocytes. The erythrocytes give the clot its red color. The clot later contracts squeezing out a clear liquid.

Blood Typing

To clarify the reactions of incompatible blood groups, this chart shows what happens when a small sample of diluted blood from one type is mixed with test serum from an incompatible type. This clumping (agglutination) of red cells can be readily seen with a low power microscope.



Horizontal letters designate blood type of recipient, vertical letters those of the donor. If types are compatible, the red blood cells remain in normal position. If types are incompatible, the red blood cells clump together, producing a reaction in the individual receiving the blood.

HEMATOLOGY
UNIT X

ASSIGNMENT SHEET #1--RECOGNIZE AND RECORD ABNORMALITIES NOTED IN BLOOD STUDIES

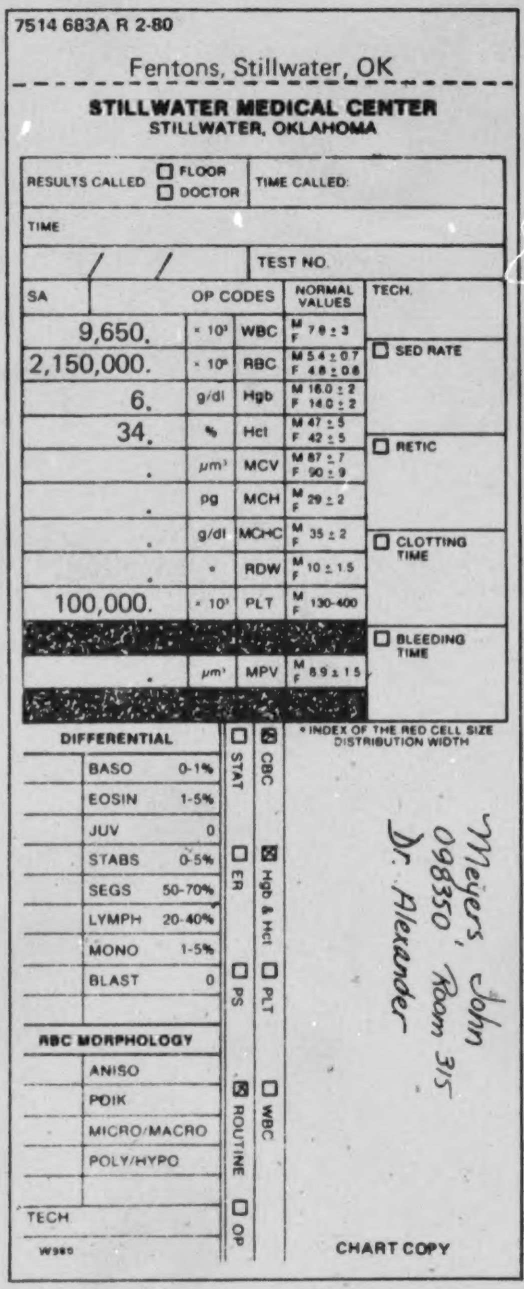
NAME ______________________________ SCORE ______________

The nurse may be the first person to see the blood study reports when they are returned to the patient area. At this time, it is most important that the nurse be able to tell at a glance that the report shows no abnormalities in blood cell values or that there are some areas that should be noted, recorded, and in some cases reported immediately. Following are three simulated laboratory reports that you will need to read and determine if there are any abnormalities in the values. If you see any blood cell values that you feel are problem areas, write in the blanks provided the value, the normal value, and what you would do in each case. Would you note it in the chart, tell the supervisor, call the physician, or further investigate the patient's problem on your own? After giving your results, share in class the reasons for your actions.

1190-C

ASSIGNMENT SHEET #1

1.



7514 683A R 2-80

Fentons, Stillwater, OK

STILLWATER MEDICAL CENTER
STILLWATER, OKLAHOMA

RESULTS CALLED ☐ FLOOR ☐ DOCTOR

TIME CALLED:

TIME

/ /

TEST NO.

SA		OP CODES	NORMAL VALUES
9,650.	$\times 10^3$	WBC	M F 7.8 ± 3
2,150,000.	$\times 10^6$	RBC	M 5.4 ± 0.7 F 4.8 ± 0.6
6.	g/dl	Hgb	M 16.0 ± 2 F 14.0 ± 2
34.	%	Hct	M 47 ± 5 F 42 ± 5
.	μm³	MCV	M 87 ± 7 F 90 ± 9
.	pg	MCH	M F 29 ± 2
.	g/dl	MCHC	M F 35 ± 2
.	*	RDW	M F 10 ± 1.5
100,000.	$\times 10^3$	PLT	M F 130-400
.	μm³	MPV	M F 8.9 ± 1.5

TECH.

☐ SED RATE

☐ RETIC

☐ CLOTTING TIME

☐ BLEEDING TIME

* INDEX OF THE RED CELL SIZE DISTRIBUTION WIDTH

DIFFERENTIAL		
	BASO	0-1%
	EOSIN	1-5%
	JUV	0
	STABS	0-5%
	SEGS	50-70%
	LYMPH	20-40%
	MONO	1-5%
	BLAST	0
RBC MORPHOLOGY		
	ANISO	
	POIK	
	MICRO/MACRO	
	POLY/HYPO	
TECH		

W980

☐ STAT ☐ ER ☐ PS ☒ ROUTINE ☐ OP

☒ CBC ☒ Hgb & Hct ☐ PLT ☐ WBC

Meyers, John
098350, Room 315
Dr. Alexander

CHART COPY

Abnormalities: ______________

____

Normal values: ______________

____

Actions: ______________

____

____

____

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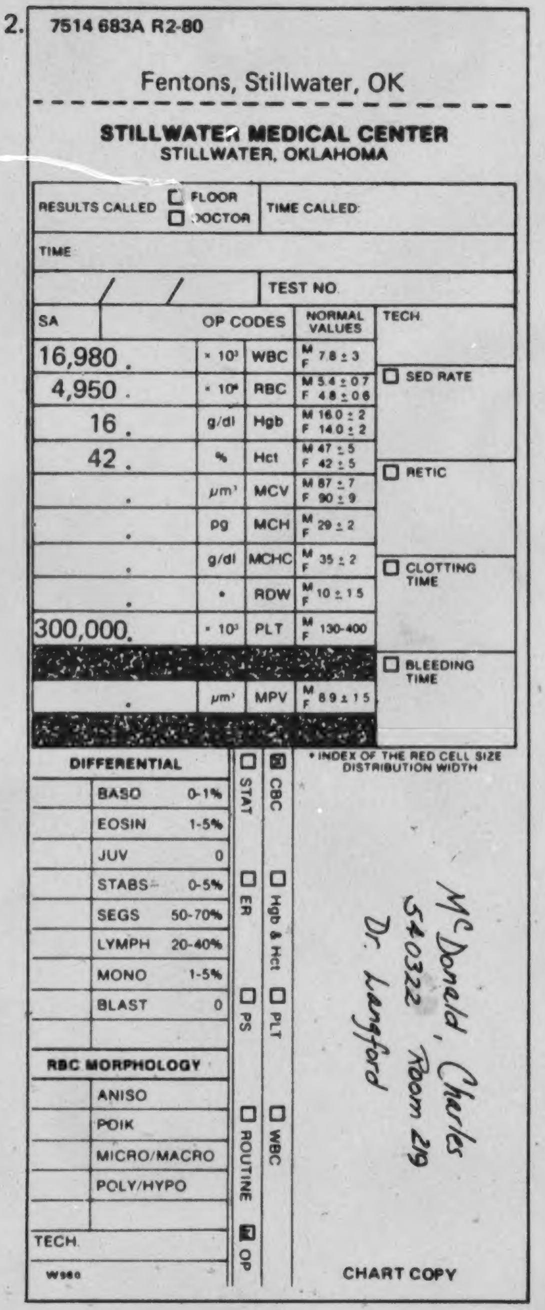
ASSIGNMENT SHEET #1

2.



7514 683A R2-80

Fentons, Stillwater, OK

STILLWATER MEDICAL CENTER
STILLWATER, OKLAHOMA

RESULTS CALLED ☐ FLOOR ☐ DOCTOR — TIME CALLED:

TIME:

/ / — TEST NO.

SA		OP CODES	NORMAL VALUES
16,980.	× 10³	WBC	M F 7.8 ± 3
4,950.	× 10⁶	RBC	M 5.4 ± 0.7 F 4.8 ± 0.6
16.	g/dl	Hgb	M 16.0 ± 2 F 14.0 ± 2
42.	%	Hct	M 47 ± 5 F 42 ± 5
.	μm³	MCV	M 87 ± 7 F 90 ± 9
.	pg	MCH	M F 29 ± 2
.	g/dl	MCHC	M F 35 ± 2
.	*	RDW	M F 10 ± 1.5
300,000.	× 10³	PLT	M F 130-400
.	μm³	MPV	M F 8.9 ± 1.5

TECH
☐ SED RATE
☐ RETIC
☐ CLOTTING TIME
☐ BLEEDING TIME

* INDEX OF THE RED CELL SIZE DISTRIBUTION WIDTH

	DIFFERENTIAL	
	BASO	0-1%
	EOSIN	1-5%
	JUV	0
	STABS	0-5%
	SEGS	50-70%
	LYMPH	20-40%
	MONO	1-5%
	BLAST	0
	RBC MORPHOLOGY	
	ANISO	
	POIK	
	MICRO/MACRO	
	POLY/HYPO	

TECH

W980

☐ STAT ☐ ER ☐ PS ☐ ROUTINE ☒ OP

☒ CBC ☐ Hgb & Hct ☐ PLT ☐ WBC

McDonald, Charles
540322 Room 219
Dr. Langford

CHART COPY

Abnormalities: ____________________
____

Normal values: ____________________
____

Actions: ____________________
____
____
____

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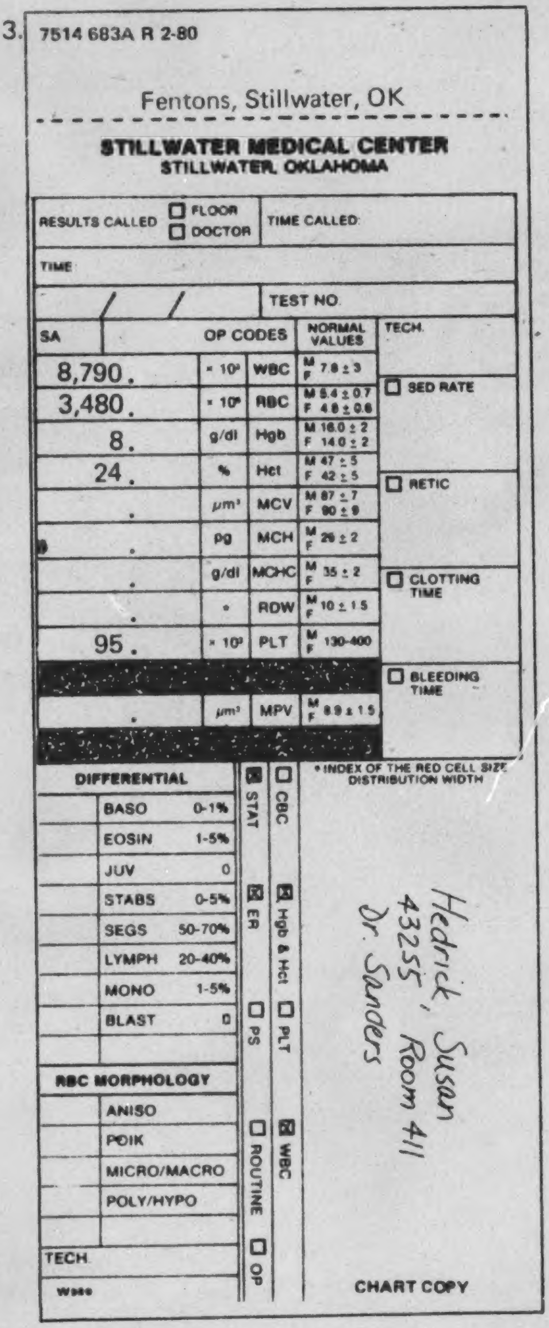
1192-C

ASSIGNMENT SHEET #1

3.



7514 683A R 2-80

Fentons, Stillwater, OK

STILLWATER MEDICAL CENTER
STILLWATER, OKLAHOMA

RESULTS CALLED	☐ FLOOR ☐ DOCTOR	TIME CALLED:
TIME:		
/ /		TEST NO.

SA		OP CODES	NORMAL VALUES	TECH.
8,790.	$\times 10^3$	WBC	M F 7.8 ± 3	
3,480.	$\times 10^6$	RBC	M 5.4 ± 0.7 F 4.8 ± 0.6	☐ SED RATE
8.	g/dl	Hgb	M 16.0 ± 2 F 14.0 ± 2	
24.	%	Hct	M 47 ± 5 F 42 ± 5	
.	μm^3	MCV	M 87 ± 7 F 90 ± 9	☐ RETIC
.	pg	MCH	M F 29 ± 2	
.	g/dl	MCHC	M F 35 ± 2	☐ CLOTTING TIME
.	*	RDW	M F 10 ± 1.5	
95.	$\times 10^3$	PLT	M F 130-400	
				☐ BLEEDING TIME
.	μm^3	MPV	M F 8.9 ± 1.5	

DIFFERENTIAL		
	BASO	0-1%
	EOSIN	1-5%
	JUV	0
	STABS	0-5%
	SEGS	50-70%
	LYMPH	20-40%
	MONO	1-5%
	BLAST	0

RBC MORPHOLOGY	
	ANISO
	POIK
	MICRO/MACRO
	POLY/HYPO

TECH

W989

☒ STAT ☒ ER ☐ PS ☐ ROUTINE ☐ OP

☐ CBC ☒ Hgb & Hct ☐ PLT ☒ WBC

* INDEX OF THE RED CELL SIZE DISTRIBUTION WIDTH

Hedrick, Susan
43255, Room 411
Dr. Sanders

CHART COPY

Abnormalities: ____________________

____

____

Normal values: ____________________

____

Actions: ____________________

____

____

____

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HEMATOLOGY
UNIT X

TEST

NAME ________________________________ SCORE ______________

1. Match terms associated with hematology to the correct definitions. Write the correct numbers in the blanks.

_____a. Clot which has moved from where it was formed

_____b. Any of a group of fat or fatlike substances which are insoluble in water

_____c. Study of blood

_____d. Liquid portion of the blood

_____e. Abnormal discharge of blood, either externally or internally

_____f. An agent which prevents or delays the formation of blood clots

_____g. Deficiency of red blood cells or hemoglobin or both

_____h. State of chemical balance between the cell and its environment

_____i. Depression of the body functions due to failure of the circulatory system

_____j. Antibody fraction of blood

_____k. Disease-producing microorganism

_____l. White blood cells that have a round nucleus and no granules in the cytoplasm

_____m. Blood cells

_____n. Clot formed in a blood vessel

_____o. Arrest of bleeding

_____p. White blood cells formed in red bone marrow, spleen, and other lymph tissues that aid in fighting infection

_____q. Large nucleus cell

1. Hematology
2. Homeostasis
3. Gamma globulin
4. Thrombus
5. Leukocytes
6. Corpuscles
7. Embolus
8. Agranulocytes
9. Anticoagulant
10. Pathogen
11. Hemorrhage
12. Anemia
13. Plasma
14. Hemostasis
15. Lipid
16. Shock
17. Megakaryocyte

______r. Red blood cells, originating in red bone marrow, that transport oxygen to the cells and carbon dioxide from the cells

______s. Clotting of blood

______t. Destruction of red blood cells with the liberation of hemoglobin which diffuses into the surrounding fluid

______u. White blood cells that have a lobed nucleus and granules in the cytoplasm

______v. Insertion of a hollow needle into the marrow cavity of a flat bone to withdraw a sample of bone marrow

______w. Solution that conducts electricity by its ions

______x. Clumping of blood cells when incompatible bloods are mixed

______y. Cells of the blood

______z. Injection of the blood of one person into the blood vessels of another

______aa. Liquid substance introduced into the body through a vein for therapeutic purposes

18. Agglutination
19. Formed elements
20. Hemolysis
21. Bone marrow puncture
22. Coagulation
23. Erythrocytes
24. Granulocytes
25. Electrolyte
26. Transfusion
27. Infusion

2. Describe functions of the blood.

a. Transports needed elements and waste--______________________________

____

____

____

____

____

b. Maintains homeostasis--______________________________

____

____

____

____

____

c. Combats infection--____

____

____

____

____

3. Select from the following list physical characteristics of blood. Write an "X" in the correct blanks.

_____a. Blood has four components

_____b. Normal pH of blood is slightly alkaline, 7.35 to 7.45

_____c. Average volume of blood in an adult is between four and five liters

_____d. Heparin is a hormone found in blood

_____e. Blood is compatible with all solutions

_____f. Blood consists of 55 percent plasma, 45 percent formed elements

_____g. Blood is measured in hematocrits

_____h. Blood makes up approximately seven percent of body weight

4. Select from the following list principal components of blood plasma. Write an "X" in the correct blanks.

_____a. Carbohydrates, primarily glucose

_____b. Enzymes

_____c. Vitamin K

_____d. Waste products

_____e. Water

_____f. Mucus

_____g. Albumin

_____h. Vitamin B_{12}

_____i. Blood proteins

_____j. Hormones and vitamins

_____k. Ascorbic acid

_____l. Lipids

______m. Gases (oxygen, nitrogen, and carbon dioxide)

______n. Mineral salts

______o. Synovial fluid

______p. Heparin

5. Distinguish between characteristics of normal blood cells. Write an "E" for erythrocytes, an "L" for leukocytes, and a "P" for platelets in the correct blanks.

______a. Vary in shape and size

______b. Remain in bloodstream unless a vessel is cut or ruptured

______c. Are irregular in size and shape

______d. Are minute, disc-shaped cells

______e. Are colorless

______f. Can be seen in clusters

______g. Have an average life span of nine days

______h. Are very fragile and break easily under stress

______i. Have an average life span of 120 days

______j. Transport oxygen to cells and carbon dioxide from cells

______k. Fight infection

______l. May move out of the blood vessels by passing between cells of the vessel walls

6. Describe the mechanism of blood clotting.

7. Complete a chart of blood types by filling in the blanks with the correct answer.

BLOOD TYPE	CAN RECEIVE BLOOD FROM	CAN GIVE BLOOD TO
Type A	a. ______________	A and AB
b. ______________	B and O	B and AB
Type AB	All	c. ______________
d. ______________	O	All

8. State facts to remember when determining blood types to be used for transfusions.

a. ____

____

b. ____

____

c. ____

____

d. ____

____

9. Select from the following list reasons for transfusions. Write an "X" in the correct blanks.

______a. To aid recovery as a preoperative or postoperative procedure

______b. To treat shock

______c. To increase calories in a nutritionally deficient patient

______d. To exchange blood in certain blood disorders

______e. To purge the system in cases of severe infection

______f. To help maintain acid-base balance

______g. To replace blood lost through hemorrhage

______h. To maintain electrolyte balance

______i. To treat anemia

10. Describe the Rh factor.

11. Match routine blood studies to the correct descriptions. Write the correct numbers in the blanks.

_____ a. Measure levels of blood components from venous blood sample

_____ b. Measures total volume of red corpuscles (erythrocytes)

_____ c. Volume of erythrocytes in a given volume of blood

_____ d. Measures white blood cells, red blood cells, hemoglobin, and hematocrit

_____ e. Measures the amount of oxygen-carrying protein pigment of red blood cells

_____ f. Scientific study of serum

_____ g. Measures total volume of white corpuscles (leukocytes)

1. Red blood count (RBC)
2. Hematocrit (Hct.)
3. Blood chemistry tests
4. Hemoglobin (Hgb.)
5. White blood count (WBC)
6. Serology
7. Complete blood count (CBC)

12. List less common blood tests done for more specific diagnoses.

a. ______________________________

b. ______________________________

c. ____________________

d. ____________________

e. ____________________

13. Match blood cells to the correct test values found in adults. Write the correct numbers in the blanks.

_____a. 12-18 gm%

_____b. 200,000-400,000

_____c. 4,500,000-5,000,000

_____d. 38-50 percent

_____e. 5,000-10,000

1. Erythrocytes (RBCs)
2. Leukocytes (WBCs)
3. Platelets
4. Hemoglobin
5. Hematocrit

14. Recognize and record abnormalities noted in blood studies.

(NOTE: If activity 14 has not been finished before the test, ask your instructor when it should be completed.)

HEMATOLOGY
UNIT X

ANSWERS TO TEST

1.

a.	7	o.	14
b.	15	p.	5
c.	1	q.	17
d.	13	r.	23
e.	11	s.	22
f.	9	t.	20
g.	12	u.	24
h.	2	v.	21
i.	16	w.	25
j.	3	x.	18
k.	10	y.	19
l.	8	z.	26
m.	6	aa.	27
n.	4		

2. Descriptions should include:
   - a. Transports needed elements and waste
     - 1) Carries oxygen from the lungs to the tissues, and carbon dioxide from the tissues to the lungs
     - 2) Carries nutrients from the digestive tract to the tissues, and waste products from tissues to the excretory organs
     - 3) Carries hormones from the organs to various tissues and cells of the body
     - 4) Moves heat generated by the muscles to other parts of the body
   - b. Maintains homeostasis
     - 1) Helps to maintain acid-base balance
     - 2) Helps to maintain electrolyte balance

3) Helps to maintain fluid balance

4) Helps to maintain body temperature

c. Combats infection

1) Some cells fight infection

2) Some components help maintain immunity to disease

3. b, c, f, h

4. a, c, d, e, i, j, l, m, n, p

5. a. L

b. E

c. P

d. E

e. L

f. P

g. L

h. P

i. E

j. E

k. L

l. L

6. Description should include:

a. Bleeding can occur on the inside or outside of the body due to trauma or various conditions

b. Clotting of the blood begins when fragile platelets rupture and cause a complex chemical process to form fibrin, an insoluble protein

c. Fibrin then acts as a mesh network which traps the remaining components of blood to form a clot

7. a. A and O

b. Type B

c. AB

d. Type O

8. a. Not all blood types are compatible and the mixing of the blood may result in hemolysis or agglutination of red cells

b. Adverse reactions to transfusion are determined largely by the type of protein in the red cells

c. Usually, a person can safely receive blood from another person but before the transfusion is given, a check for compatibility should be made

d. If a transfusion of incompatible blood is given, the person may have a serious or fatal reaction

9. a, b, d, g, i

10. Description should include:

    a. Approximately 85 percent of the population have a red blood cell protein called the Rh factor; these people are Rh positive

    b. Approximately 15 percent of the population do not have this protein; these people are Rh negative

    c. When Rh positive blood is given to an Rh negative person, the recipient's Rh negative blood may produce counteracting proteins, called antibodies, which destroy the red cells from the Rh positive blood; this does not happen when Rh negative blood is given to an Rh positive recipient

    d. An Rh negative mother may become sensitized by proteins from an Rh positive baby

    e. During pregnancy following sensitization, the mother's antibodies may pass into the blood of the unborn infant and cause erythroblastosis fetalis, a destruction of red blood cells

11. a. 3

    b. 1

    c. 2

    d. 7

    e. 4

    f. 6

    g. 5

12. a. Platelet count

    b. Blood sugar

    c. Clotting time and bleeding time

    d. Examination of blood for parasites

    e. Bone marrow puncture

13. a. 4

    b. 3

    c. 1

    d. 5

    e. 2

14. Evaluated to the satisfaction of the instructor

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of the respiratory system in assessment of breath sounds to be able to distinguish normal sounds from abnormal ones. The student should also be able to demonstrate skills used in assisting patients with therapy or diagnostic tests concerning the respiratory system. This knowledge will be evidenced by completion of assignment sheet, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the respiratory system to the correct definitions.
2. Identify structures of the respiratory system.
3. Describe the structures of the nasal cavities.
4. Select from a list functions of the nasal cavities.
5. Match structures of the pharynx to the correct descriptions.
6. Distinguish between functions of the pharyngeal and laryngeal structures.
7. Describe structures of the bronchi.
8. Distinguish between functions of the bronchi, bronchial structures, and the trachea.
9. Select from a list characteristics of the lung.
10. Describe the mechanisms of breathing.
11. Select from a list factors necessary for normal respiration.
12. List factors that affect respiratory rates.
13. Describe criteria to consider when assessing the respiratory system.
14. List common breath sounds.
15. List influences which may predispose respiratory difficulty.
16. List nursing measures that increase respiratory efficiency.
17. Match terms associated with ventilation to the correct definitions.

18. List signs and symptoms of hypoxia.

19. Match terms associated with administration of oxygen to the correct definitions.

20. State facts to remember when administering oxygen.

21. Name sources of oxygen supply.

22. Describe safety factors to observe when using oxygen.

23. Describe methods of administering oxygen to infants and small children.

24. Assess breath sounds.

25. Demonstrate the ability to:

    a. Assist with breathing exercises.

    b. Suction oronasal tract.

    c. Assist with postural drainage.

    d. Collect a sputum specimen.

    e. Use an oxygen cylinder.

    f. Use piped-in oxygen unit.

    g. Use a nasal cannula.

    h. Insert a nasal catheter.

    i. Use an oxygen mask.

    j. Prepare and use an oxygen tent.

    k. Obtain a throat culture.

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

- A. Provide students with objective sheet.
- B. Provide students with information sheet and make transparencies.
- C. Discuss unit and specific objectives.
- D. Discuss information sheet.
- E. Show anatomy of respiratory system on model.
- F. Dissect an animal lung for more realistic demonstration of anatomy.
- G. Invite respiratory therapist to bring equipment to explain to class.
- H. Obtain information from county health department concerning pollution control in your community.
- I. Provide assignment sheets.

  (NOTE: Allow students to practice skills needed to complete assessment of breath sounds. Various companies produce records and tapes of abnormal breath sounds for students to listen to and develop an awareness of what types of breath sounds they should look for.)
- J. Provide job sheets.
- K. Demonstrate the use of oxygen equipment used in all job sheets.
- L. Obtain pamphlets or policy sheets concerning the use of oxygen in your local hospital or nursing home.

  (NOTE: If possible, have the students attend an in-service presentation of how to contain a fire that was started with oxygen equipment.)
- M. Give test.

II. Instructional materials:

- A. Objective sheet
- B. Information sheet
- C. Transparency masters
  1. TM 1--The Respiratory Tract
  2. TM 2--Diffusion of Oxygen and Carbon Dioxide

   3. TM 3--Some Outlets for Piped-in Oxygen
   4. TM 4--Flowmeter for Piped-in Oxygen
   5. TM 5--Nasal Cannula and Catheter
   6. TM 6--Oxygen Mask
   7. TM 7--Oxygen Tent

D. Assignment Sheet #1--Assess Breath Sounds

E. Job sheets

   1. Job Sheet #1--Assist with Breathing Exercises
   2. Job Sheet #2--Suction Oronasal Tract
   3. Job Sheet #3--Assist with Postural Drainage
   4. Job Sheet #4--Collect a Sputum Specimen
   5. Job Sheet #5--Use an Oxygen Cylinder
   6. Job Sheet #6--Use Piped-in Oxygen Unit
   7. Job Sheet #7--Use a Nasal Cannula
   8. Job Sheet #8--Insert a Nasal Catheter
   9. Job Sheet #9--Use an Oxygen Mask
   10. Job Sheet #10-Prepare and Use an Oxygen Tent
   11. Job Sheet #11--Obtain a Throat Culture

F. Test

G. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study*. Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/ Curriculum and Instructional Materials Center, 1974.

B. Sloan, Jamee. *Health Service Careers*. Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1979.

C. *Assessing Vital Functions Accurately. Nursing Skillbook Series*. Horsham, Pennsylvania: Intermed Communications, Inc., 1978.

D. Memmler, Ruth, and Wood, Dena Lin. *The Human Body in Health and Disease*. Philadelphia: J.B. Lippincott Company, 1977.

IV. Films--*I Am Joe's Lung.* Color, 25 min., Pyramid Films, 1975. Available from Pyramid Films, Box 1048, Santa Monica, California 90406.

(NOTE: This film is available on a free-loan basis to Oklahoma teachers *only* from the Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order from the address above.)

V. Filmstrips:

(NOTE: The following filmstrips are available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.)

A. *Breath Sounds.*

B. *Your IPPB Therapy.*

C. *Abnormal Breath Sounds.*

D. *Normal Breath Sounds.*

E. *Physiology of Respiratory System.*

VI. Polar motion spinner and transparencies--Available from American Animation, Inc., Six East Spruce Street, Box 335, Moorestown, New Jersey 00157.

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

INFORMATION SHEET

I. Terms associated with the respiratory system

A. Respiration--Exchange of oxygen (O_2) and carbon dioxide (CO_2) in the body

(NOTE: There are two kinds of respiration. One is external or lung-breathing, that takes place when the exchange of oxygen for carbon dioxide occurs within the alveoli of the lungs. The second is known as internal or cell-breathing, that takes place when the exchange of oxygen for carbon dioxide occurs within the cells.)

B. Breathing--Alternate inspiration and expiration of air that supplies oxygen to tissue cells and removes the gaseous waste product, carbon dioxide

C. Inspiration--Drawing of air into lungs

D. Expiration--Expulsion of air from the lungs

E. Sinuses–Eight cavities in the skull connected with the nasal cavities

F. Pharynx--Muscular passageway (throat) for food and liquids into the esophagus and for air into the lungs

G. Cilia--Hairlike processes projecting from epithelial cells

H. Adenoids–Masses of lymphoid tissue found in the nasopharynx

I. Tonsils--Masses of lymphoid tissue found in the oropharynx

J. Eustachian tubes–Passageways which connect the middle ear with the pharynx

K. Larynx--Voice box

L. Sac--Cavity or pouch; baglike part of an organ

M. Hilum--Notches or depressions on the inner surface of the lungs where the arteries, veins, bronchi, and nerves enter

N. Aspiration--To draw in or out by suction

(NOTE: Foreign bodies may be aspirated into the nose, throat, or lungs on inspiration and cause respiratory problems.)

II. Structures of the respiratory system (Transparency 1)

A. Frontal sinus

INFORMATION SHEET

B. Nasal cavity

C. Sphenoidal sinus

D. Nasopharynx

E. Oropharynx

F. Epiglottis

G. Laryngeal pharynx

H. Larynx and vocal folds

I. Trachea

J. Lungs

K. Bronchi

L. Mediastinum

M. Diaphragm

N. Terminal bronchiole

O. Alveoli

III. Structures of the nasal cavities

A. Two spaces (nasal cavities) separated by a partition (nasal septum)

B. Three small bones, the turbinates or conchae, project into each nasal cavity

C. Nasal cavities are lined with a ciliated mucous membrane

IV. Functions of the nasal cavities

A. Removal of foreign bodies, such as dust particles and bacteria, which are filtered out by the cilia or trapped on the surface of the mucous membrane

B. Warming and moistening of the air before it reaches the lungs

C. Sense of smell

V. Structures of the pharynx

A. Nasopharynx--Upper portion containing the adenoids

B. Oropharynx--Middle section behind the mouth containing the tonsils and the openings of the eustachian tubes

INFORMATION SHEET

C. Laryngeal pharynx--Lower section with openings to larynx and esophagus

VI. Functions of the pharyngeal and laryngeal structures

A. Pharyngeal structures

1. Serve as passageways for food, fluids, and air

2. Adenoids and tonsils serve as filters for microorganisms and other foreign substances

3. Eustachian tubes equalize the pressure in the middle ear

B. Laryngeal structures

(NOTE: The larynx is made up of cartilage and is held together by ligaments. The upper end contains the vocal cords, two triangular-shaped membranous folds which extend from front to back. Entrance to the larynx is protected by the epiglottis.)

1. Serve as passageway for air only

2. Produce sound (voice)

3. Epiglottis prevents food from entering larynx

VII. Structures of the bronchi

A. As the trachea enters the chest cavity, it divides into two smaller tubes, the right and left bronchus

B. As the bronchi enter the lungs at the hilum, they divide into smaller branches, forming the bronchial tree

C. The smallest branches, called bronchioles, have walls composed of smooth muscle and a lining of mucous membrane

D. At the end of each bronchiole there is a cluster of air sacs, resembling a bunch of grapes, known as the alveoli

E. Each air sac, alveolus, is lined with epithelium, one cell-layer thick and surrounded by capillary network

VIII. Functions of the bronchi, bronchial structures, and the trachea (Transparency 2)

A. Bronchi and bronchial structures

1. Passageway of oxygen to alveoli

2. Exchange of gases (oxygen and carbon dioxide)

INFORMATION SHEET

B. Trachea

(NOTE: The trachea is a ciliated, mucous-lined tube with a cartilage framework extending from the larynx to the bronchi.)

1. Conduction of air to and from lungs

2. Transportation of inhaled foreign particles out of body by cilia

IX. Characteristics of the lung

A. Consists of two cone-shaped organs which nearly fill the chest cavity

B. Top of the lung is called the apex; the lower, wider portion that fits over the diaphragm is called the base

C. Is comprised of spongy tissue filled with alveoli, nerves, and blood and lymph vessels

D. Is divided into sections called lobes, the right having three lobes and the left two

E. Covering is a smooth, double-layered sac, pleura, which provides moisture to prevent friction during movement

X. Mechanisms of breathing

(NOTE: The lungs do not move by themselves during the process of breathing; they are inflated and deflated by the muscles which surround them.)

A. Inspiration--The diaphragm and the intercostal muscles contract, creating a vacuum; air rushes in to inflate the lungs

B. Expiration--Diaphragm and intercostal muscles relax; lungs are compressed and air flows out

C. Control--Regulated by the respiratory center of the brain, located in the medulla, immediately above the spinal cord

(NOTE: A person can control his or her breathing for a time, although breathing is usually an automatic process.)

XI. Factors necessary for normal respiration

A. Adequate oxygen supply

B. Open airway

C. Sufficient, healthy lung tissue and intact rib cage and diaphragm

INFORMATION SHEET

D. Nerve and chemical control

E. Sufficient hemoglobin and ample volume of blood

F. Healthy heart and adequate circulation

XII. Factors that affect respiratory rates

(NOTE: The average respiratory rate for an adult varies from 14-20 times per minute and will be normally higher in children. Remember in counting respirations that one respiration consists of a single inspiration and a single expiration.)

A. Age

B. Sex

C. Exercise

D. Body position

E. Temperature

F. Drugs

G. Physical condition

H. Emotions

XIII. Criteria to consider when assessing the respiratory system (Assignment Sheet #1; Job Sheets #4 and #11)

A. Objective data

1. Rate or number of respirations per minute

(NOTE: Respiratory rate should be counted, not estimated. When respiratory difficulty is observed or expected, respirations should be assessed frequently.)

2. Rhythm or the regularity of rate and the depth of respirations

3. Character or the effort required and the muscles involved

(NOTE: The major respiratory muscles are the diaphragm and the external intercostals. Severe muscular exercise, acute airway obstruction, and atelectasis are some of the normal and abnormal conditions which might bring about the use of the accessory respiratory muscles: the sternocleidomastoid, trapezius, and latissimus dorsi muscles. Using these muscles increases the volume of inspired air.)

INFORMATION SHEET

4. Breath sounds, including those heard with the unaided ear and those heard with a stethoscope

5. Mental status and level of consciousness

   (NOTE: Early signs of cerebral oxygen deficiency are restlessness, anxiety, irritability, and apathy. The mental status of a person with a history of respiratory difficulty should be observed and recorded.)

B. Subjective data

1. History of previous or current respiratory, cardiac, or blood disorders

2. Description of respiratory impairment

3. Impression of limitations due to respiratory impairment

C. Laboratory data

1. X-rays of chest

2. Pulmonary function tests which measure the lung capacity and mechanics of breathing

3. Blood analyses such as hemoglobin, carbon dioxide combining power, and blood gases

   (NOTE: Arterial blood gases are drawn to determine levels of gases within the blood. A normal blood gas test will show the pH and amounts of carbon dioxide, oxygen, oxygen saturation, and biocarbonate.)

4. Sputum specimens and throat cultures

XIV. Common breath sounds

A. Rales

(NOTE: Rale is french for rattle. There are five basic types: musical, crepitant, subcrepitant, bubbling, and gurgling. Rales are associated with pulmonary congestion and often indicate heart failure.)

B. Ronchi and wheezing

(NOTE: These may indicate bronchitis.)

C. Popping

(NOTE: Popping sounds occur as the air moves through and pops open collapsed airways or parts of the lungs filled with fluid.)

INFORMATION SHEET

D. Crackles

(NOTE: Crackles are high-pitched sounds that may indicate early pulmonary edema, pneumonia, or tuberculosis.)

XV. Influences which may predispose respiratory difficulty

A. Smoking

B. Hazardous occupations

Examples: Mining, working with asbestos, milling, using chemical sprays

C. Respiratory or cardiac impairment

D. Air pollution

E. Anesthesia, either inhaled or systemic

F. Trauma

G. Obesity

H. Narcotics or other drugs

I. Musculoskeletal defects or poor posture

J. Immobility

K. Neurological defects

L. Aspiration

XVI. Nursing measures that increase respiratory efficiency (Job Sheets #1, #2, and #3)

A. Changing patient's position frequently

B. Assisting patient with deep-breathing exercises

C. Encouraging the patient to cough

(NOTE: Coughing provides an effective means of expelling secretions and other debris from the respiratory tract. It is most important that the postoperative patient cough and breathe deeply to prevent hypostatic pneumonia.)

D. Suctioning the respiratory tract

(NOTE: Suctioning of obstructive materials such as blood, vomitus, or mucus may be necessary to open the respiratory tract so that oxygen may flow freely.)

INFORMATION SHEET

E. Postural drainage

F. Early ambulation and/or exercise following illness, injury, or surgery

G. Mechanically-assisted respiratory therapy

(NOTE: The use of mechanically-assisted inhalation therapy should not be permitted to replace effective nursing measures. In some cases where patients are not ventilating properly, assisted therapy can increase the respiratory efficiency.)

XVII. Terms associated with ventilation

A. Ventilation--Inspiration and expiration of air from the lungs

B. Hyperventilation--Abnormally rapid, deep breathing

C. Anoxia--Absence or deficiency of oxygen

D. Hypoxia--Oxygen deficiency

E. Atelectasis--Collapse of a lung or part of a lung

(NOTE: In newborn infants, atelectasis is incomplete expansion of the lungs.)

F. Hydration--Absorption of, or combination with, water

G. Ciliary action--Wavelike movement of the cilia, such as those on the epithelium of the respiratory tract

H. Postural drainage--Removal of bronchial secretions or the contents of a lung abscess by the use of gravity and position

I. Hypostatic pneumonia--Collection of fluid in the dependent portion of the lung which is seen in patients who remain in one position for long periods of time

J. Respiratory therapy--Program for prevention and treatment of respiratory and circulatory dysfunctions

K. Blow bottle--Large container partially filled with water; used for respiratory exercise

L. Intermittent positive pressure breathing (IPPB)--Mechanical device used to provide a specific amount of air; air and oxygen; or air, oxygen, and medication under increased pressure

(NOTE: This breathing device helps by inflating the lungs during inspiration under safe, controlled pressure. It can be used to assist breathing in patients with specific respiratory disorders or for those who have no spontaneous respiratory movements, as in brain injuries or respiratory paralysis.)

INFORMATION SHEET

M. Incentive spirometer--Volume-measuring device that provides an incentive to deep breathe

(NOTE: This device is often used to supplement deep breathing.)

N. Glottis--Vocal folds and the space between them

O. Respiratory therapist--Individual skilled in the use of medications and physical agents for respiratory dysfunctions

P. Nebulizer--Device that breaks up a liquid into small particles or mist which can then be carried down into the alveoli with air

Q. Tidal volume--Amount of air breathed in and out by a single breath

R. Bronchospasm--Temporary narrowing of the bronchi due to involuntary contraction of the smooth muscle of the bronchi

XVIII. Signs and symptoms of hypoxia

A. Restlessness, irritability, or anxiety

B. Yawning

C. Headache

D. Increased pulse rate

E. Irregular respirations

F. Decreased coordination or awareness

G. Dizziness

H. Cyanosis of lips and nails

I. Dyspnea

J. Delirium

K. Muscle spasm or twitching

L. Dilated pupils

M. Increased respiratory sounds

XIX. Terms associated with administration of oxygen (Transparencies 5 and 6; Job Sheets #5, #6, #7, #8, #9, and #10)

A. Flow rate--Amount of oxygen supplied during each minute of administration

B. Regulator--Mechanical device used on an oxygen cylinder with one gauge to show how much oxygen the tank contains and a second gauge to show the rate of flow

INFORMATION SHEET

C. Flowmeter--Device for measuring the rate of flow of a gas or liquid in liters per minute

D. Static electricity--Electricity produced by friction

E. Retrolental fibroplasia--Retinal damage in premature infants following administration of a high concentration of oxygen (40 percent)

F. Nasal cannula--Disposable plastic device which has two protruding prongs for insertion into the nostrils; used to administer oxygen to adults and older children

G. Nasal catheter--Plastic tube with rounded tip for insertion into the nasopharynx or oropharynx for administration of oxygen to adults and older children

H. Oxygen mask--Plastic device of varying sizes and shapes made to fit over the nose and mouth for the administration of oxygen to adults and older children

I. Oxygen tent--Canopy of lightweight, supple, transparent material which encloses the upper part of a patient's body and bed; used to administer oxygen to adults and older children

J. Humidifier--Container, usually a glass jar, attached to oxygen equipment to increase moisture content of oxygen during administration

K. Mucolytic--Dissolving or liquefying mucus

L. Croupette--Oxygen tent with humidification to be used for an infant or child

XX. Facts to remember when administering oxygen

A. Oxygen supports combustion so there is always danger of fire when it is used

B. Human body is unable to store oxygen so there must be an adequate supply continually available

C. Oxygen must be humidified by water, saline, or a medicated solution when giving it therapeutically

D. The rate of flow is prescribed by the physician and is determined by the condition of the patient and the method of administration

E. All patients and their families should be instructed if oxygen is being used and necessary safety precautions should be stressed

(NOTE: Oxygen therapy is sometimes begun as an emergency measure with little time for explanations. However, as soon as possible, the patient and family should be given necessary explanations.)

INFORMATION SHEET

XXI. Sources of oxygen supply

A. Cylinders or tanks of oxygen that may be moved from place to place

B. Piped-in unit with wall mountings

XXII. Safety factors to observe when using oxygen

(NOTE: These safety factors and institutional policies are for the protection of patients and personnel.)

A. Oxygen is potentially dangerous and must be handled with care

B. Open flames and sparks in the oxygen area should be avoided

C. Oil and grease should not be used on oxygen cylinders, valves, regulators, or other fittings

D. All-cotton fabrics are preferable in the area where oxygen is being administered

(NOTE: Wool, silk, rayon, nylon, and other synthetic fabrics generate static electricity and are dangerous to use.)

E. Mattresses and bed clothing may become saturated with oxygen, causing them to be highly flammable

(NOTE: Mattresses should be covered with plastic.)

F. Use of any electrical devices should be avoided or discontinued

(NOTE: Such devices include heating pads, signal cords, razors, radio, electrically-controlled beds, and remote controls for television sets.)

G. No Smoking and Oxygen in Use signs must be posted prominently on the door and at the patient's bedside

(NOTE: Visitors and other patients in the room may need to be reminded that the safety regulations must be observed by them.)

H. Regulator on the oxygen administration equipment should be adjusted only by authorized persons

(NOTE: It is part of each nurse's responsibility to enforce this regulation to prevent injury to the patient and others or damage to equipment.)

I. Fluid level in humidifier should be maintained to ensure adequate moisture to prevent irritation of the mucous membrane

J. Prescribed concentrations of oxygen must be maintained; higher concentrations may cause body injury such as retrolental fibroplasia or damage to lungs or brain

INFORMATION SHEET

K. Transfer and store oxygen cylinder very carefully

XXIII. Methods of administering oxygen to infants and small children

A. Incubator or Isolette

(NOTE: Isolette is a trade name for a self-contained incubator permitting isolation and manipulation of an infant. Because incubators vary, it will be necessary to consult manufacturer's instructions.)

1. Used for premature and small neonates

2. Provides closed system with controlled temperature, humidity, and oxygen

B. Bubble or hood

1. Used for newborn and smaller infants who require treatment in addition to controlled temperature, humidity, and oxygen

2. Provides closed system apparatus which covers only the head or the head and shoulders

3. May be used in an incubator or in a crib with a warming unit

4. Limits movements of the child; cannot be used for an older infant who would move about

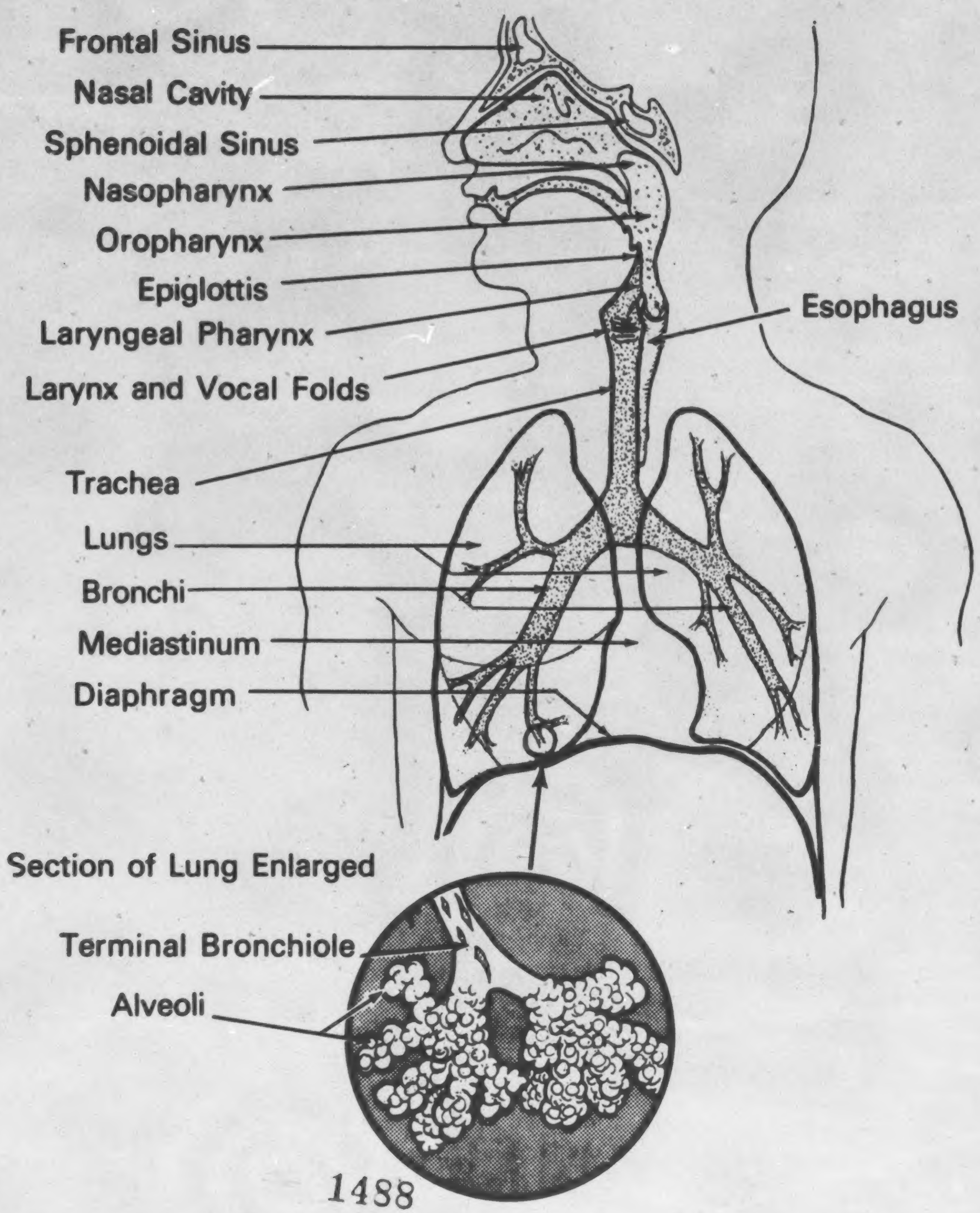
C. Mist or croupette

1. Used for larger infants and small children

2. Provides humidified, cooled oxygen in a closed system

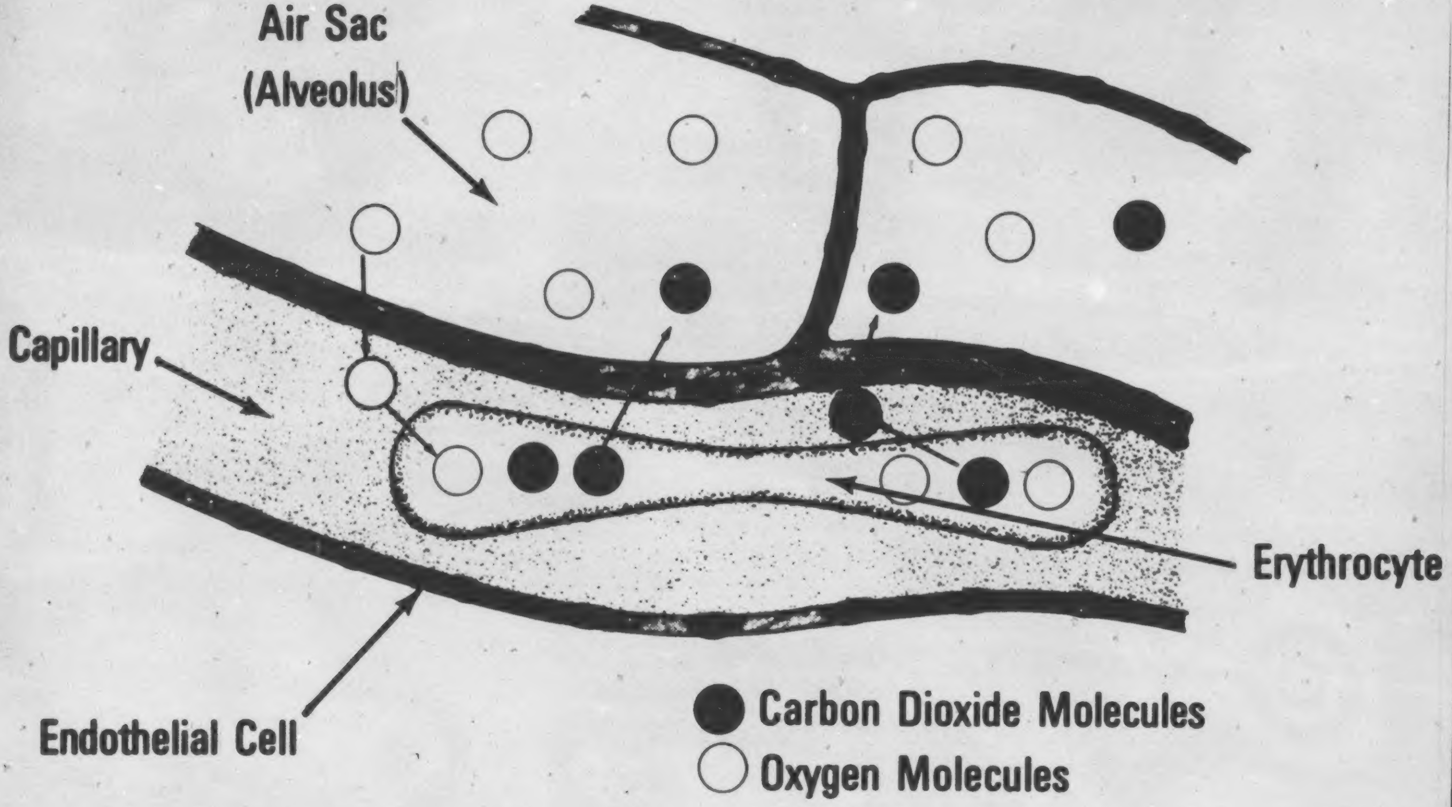
3. Encloses child and crib; allows for movement of child within a controlled atmosphere

The Respiratory Tract

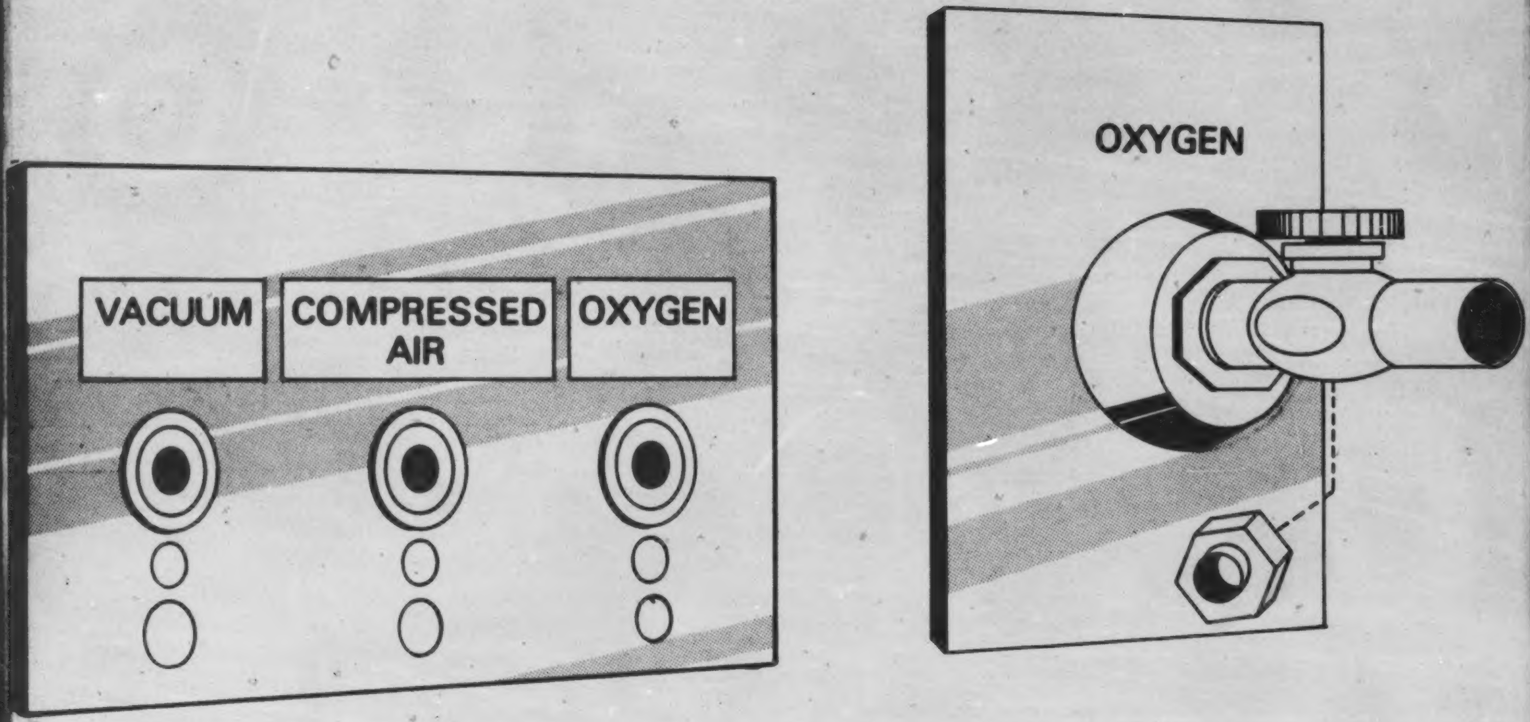

Frontal Sinus
Nasal Cavity
Sphenoidal Sinus
Nasopharynx
Oropharynx
Epiglottis
Laryngeal Pharynx
Larynx and Vocal Folds
Esophagus
Trachea
Lungs
Bronchi
Mediastinum
Diaphragm
Section of Lung Enlarged
Terminal Bronchiole
Alveoli

1488

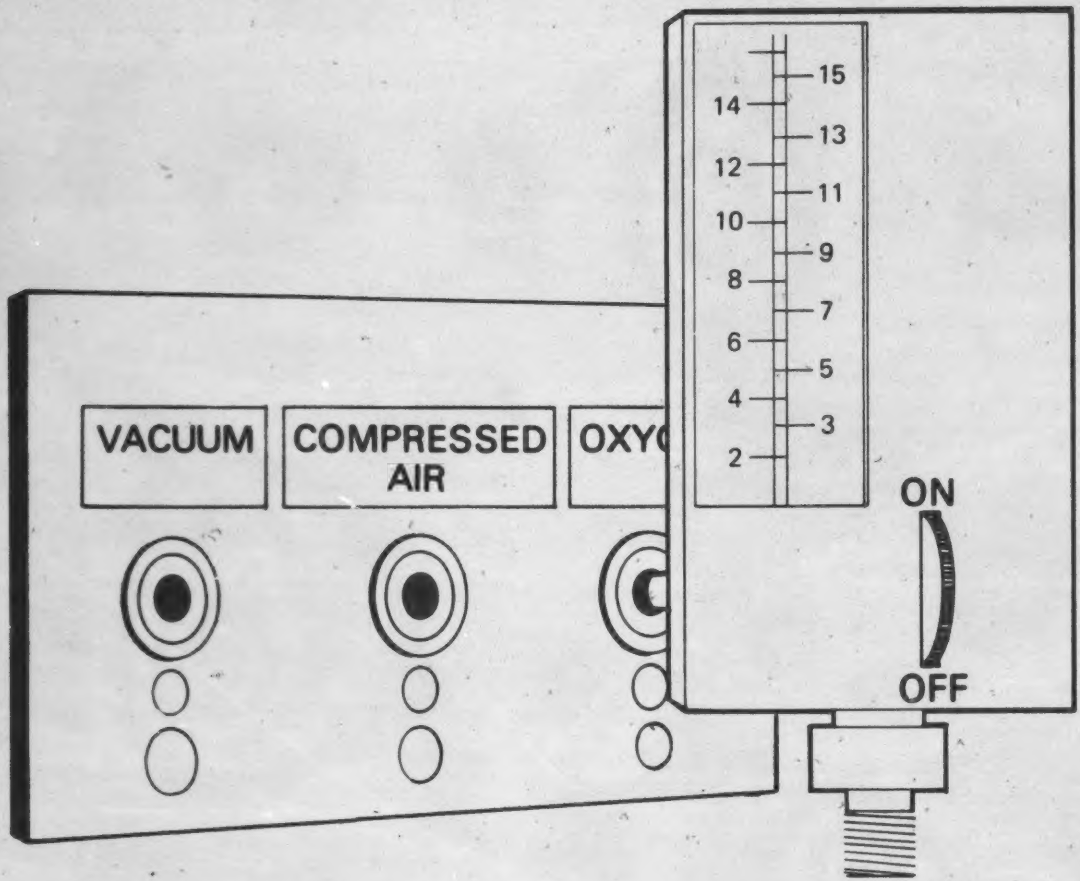
Diffusion of Oxygen and Carbon Dioxide


Air Sac
(Alveolus)
Capillary
Erythrocyte
Endothelial Cell
● Carbon Dioxide Molecules
○ Oxygen Molecules

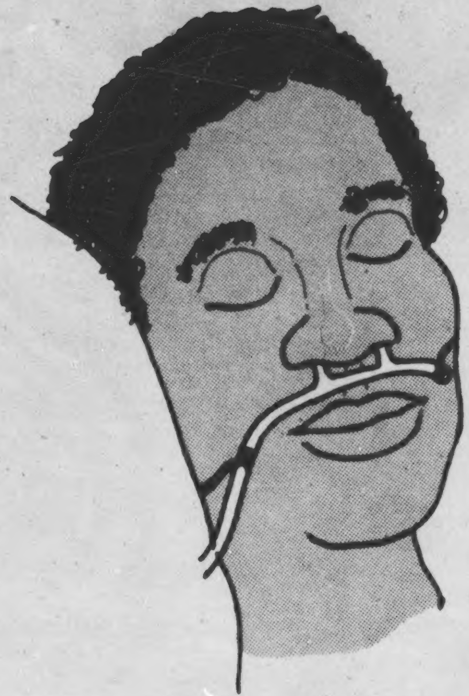
Some Outlets for Piped-in Oxygen


VACUUM
COMPRESSED AIR
OXYGEN
OXYGEN

Flowmeter for Piped-in Oxygen

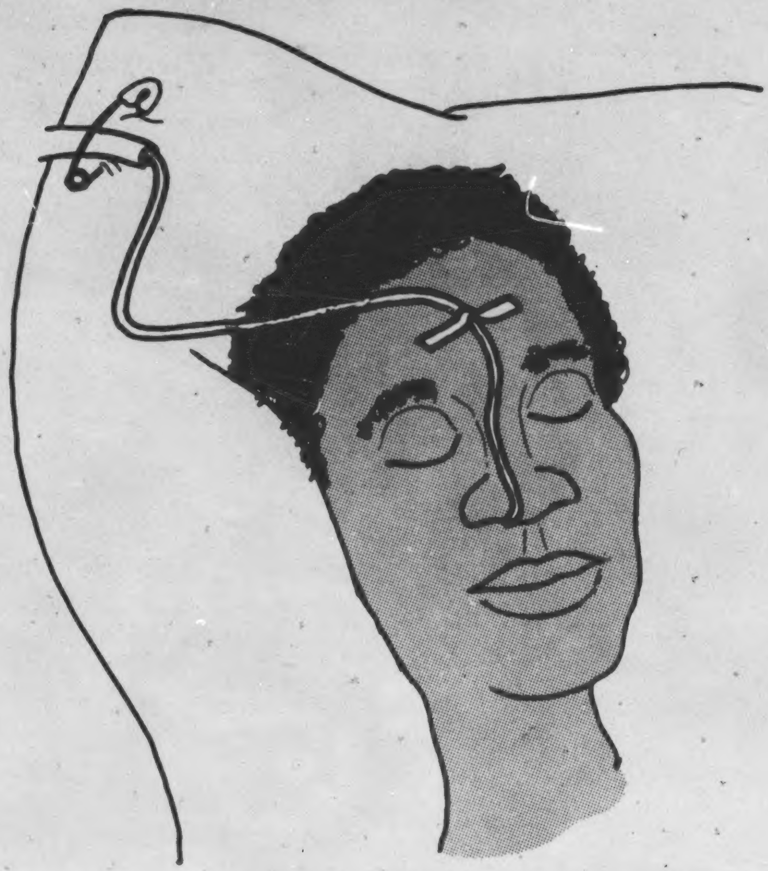

VACUUM
COMPRESSED AIR
OXY
15
14
13
12
11
10
9
8
7
6
5
4
3
2
ON
OFF

Nasal Cannula and Catheter



1492

Cannula



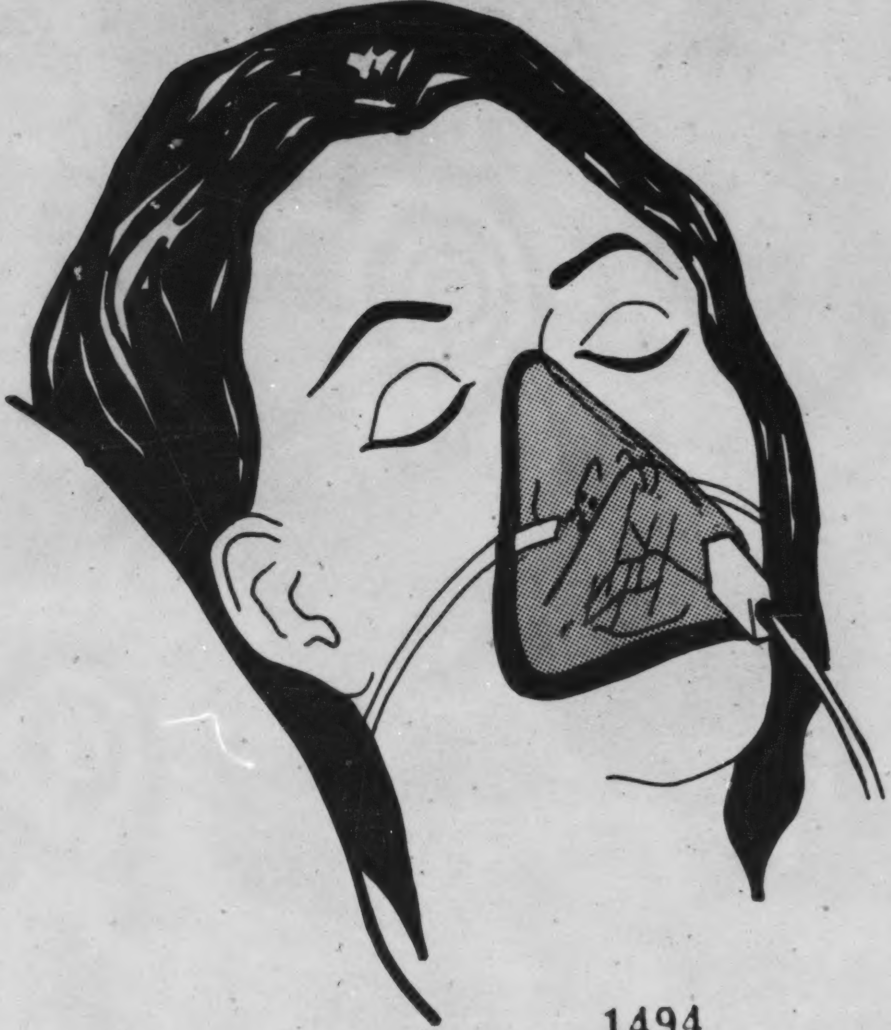
Catheter

1493

TM 5

PN I - 1231-C

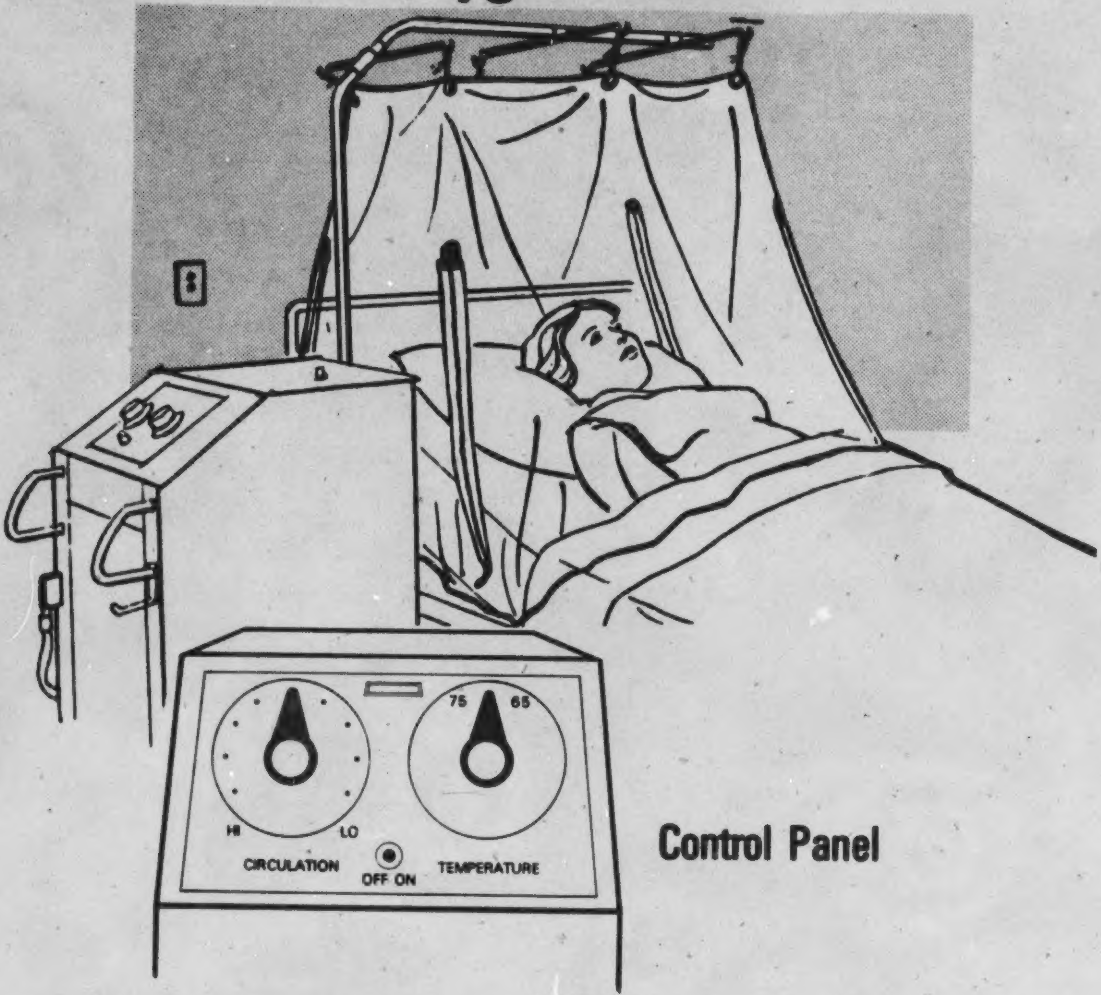
Oxygen Mask



1494

PN I - 1233-C

Oxygen Tent


75
65
HI
LO
CIRCULATION
OFF ON
TEMPERATURE

Control Panel

PN I - 1237-C

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

ASSIGNMENT SHEET #1--ASSESS BREATH SOUNDS

NAME________________________________ SCORE__________

Assessing breath sounds correctly takes a great deal of practice and requires various skills. Many conditions and changes that occur during a patient's illness can be found and treatment provided, before serious problems occur. Following a certain procedure as the assessment is done can provide you with some consistent information. In Part I of the assignment sheet, practice your skills on a willing classmate. Become comfortable with the procedures and the skills involved before completing Part II. Two forms are provided for you to assess two patients. When you have completed your assessments, you may want to discuss your findings with your classmates and/or instructor.

PART I

Date:____________

Patient's name or initials:________________________ Age:______

Admitting diagnosis:________________________________

____

Medical history of lung disease, pneumonia, tuberculosis, asthma, or frequent colds?

____

____

Medical history of any cardiovascular disease?________________

____

Does patient smoke?________________ Amount?______________

Occupation?________________________________

Is there any pain, coughing, or difficulty in breathing at this time?______________

____

Last chest X-ray?________________________________

Vital signs: Temp____P____R____B/P____ Time taken:______________

Admission vital signs: Temp____P____R____B/P____

ASSIGNMENT SHEET #1

General appearance

Skin color: ____

Examples: Cyanotic, pale, mottled, pink, flushed; nail beds, lips

Behavior: ____

____

Examples: Calm, restless, rolling from side to side, pacing floor

Position in bed or chair: ______________________________________

____

Examples: Sitting up in bed, 45-degree angle, sitting up in chair but leaning to left side

Character of respirations

Muscles used in breathing: ______________________________________

Examples: Diaphragmatic, intercostals, trapezius

Depth of respirations: ______________________________________

Examples: Shallow, deep

Rate of respirations: ______________________________________

____

Examples: Rapid, slow

Exertion upon inspiration and expiration: __________________________

____

Examples: Labored breathing upon inspiration, long interval between inspiration and expiration

Symmetry of breathing: ______________________________________

____

Examples: Chest expands only on one side, right side appears larger, barrel chest

PN I - 1239-C

ASSIGNMENT SHEET #1

Depth of respirations: ____________________

Rate of respirations: ____________________

____

Exertion upon inspiration and expiration: ____________________

____

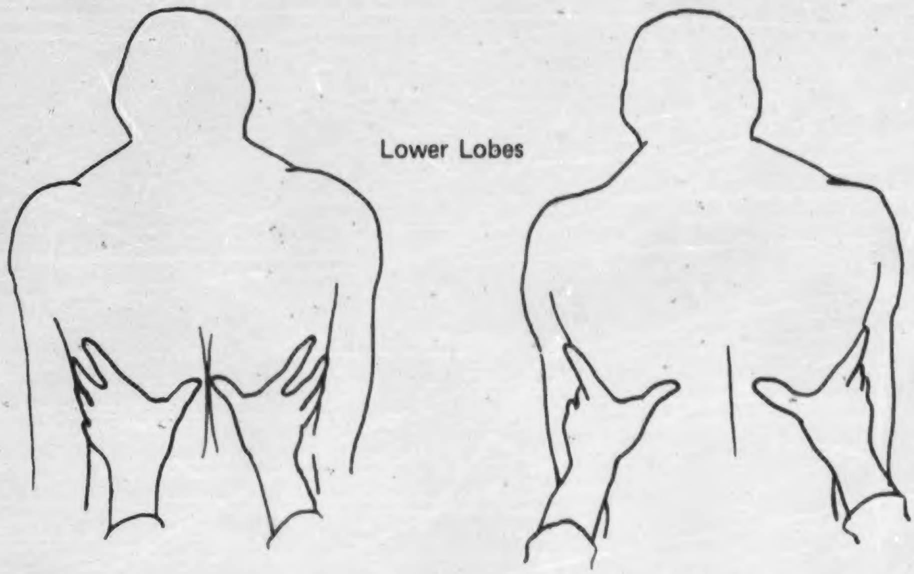
Symmetry of breathing: ____________________

____

Palpation of chest

Begin by working your hands on the skin over the areas to be examined. At each area have the patient say "99" in a low voice.

Indicate by marking on the following pictures where you hear fremitus.



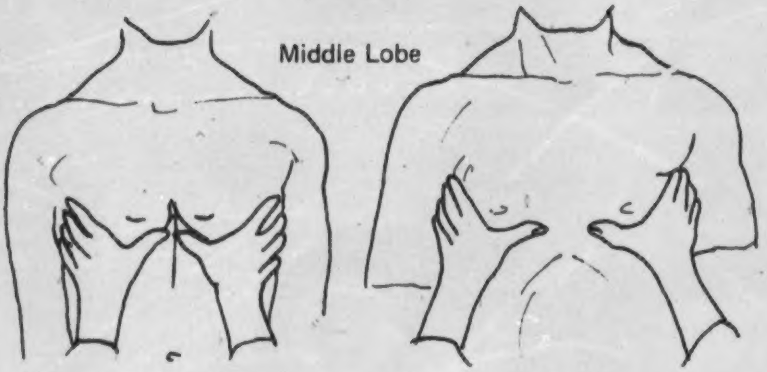
Expiration

Inspiration

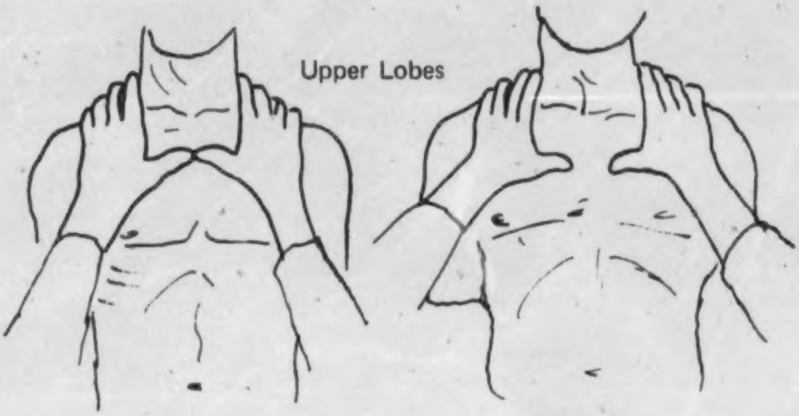
Lower Lobes

1240-C

ASSIGNMENT SHEET #1



Middle Lobe



Upper Lobes

Auscultation

Sounds heard:

Scapula: (above, middle, and below) ____

____

Lungs: (upper and lower lobes) ____

____

PN I - 1241-C

ASSIGNMENT SHEET #1

Lungs: (upper and lower lobes) ____

____

Extra sounds heard, and where ____

____

____

Examples: Wheezing, squeaks, crackles, bubbling, gurgling, pops; rales (rattles) can be heard as various sounds

ASSIGNMENT SHEET #1

PART II

Date: ____________________

Patient's name or initials: ____ Age: ________

Admitting diagnosis: ____

____

Medical history of lung disease, pneumonia, tuberculosis, asthma, or frequent colds?

____

____

Medical history of any cardiovascular disease? ______________________________

____

Does patient smoke? __________________________ Amount? __________________

Occupation? ____

Is there any pain, coughing, or difficulty in breathing at this time? ________________

____

Last chest X-ray? ____

Vital signs: Temp_____ P_____ R_____ B/P_____ Time taken: _________

Admission vital signs: Temp_____ P______ R_____ B/P_____

General appearance

Color: ____

Behavior: ____

____

Position in bed or chair: ____

____

Character of respirations

Muscles used in breathing: ____

PN I - 1243-C

ASSIGNMENT SHEET #1

Depth of respirations: ____________________

Rate of respirations: ____________________

____

Exertion upon inspiration and expiration: ____________________

____

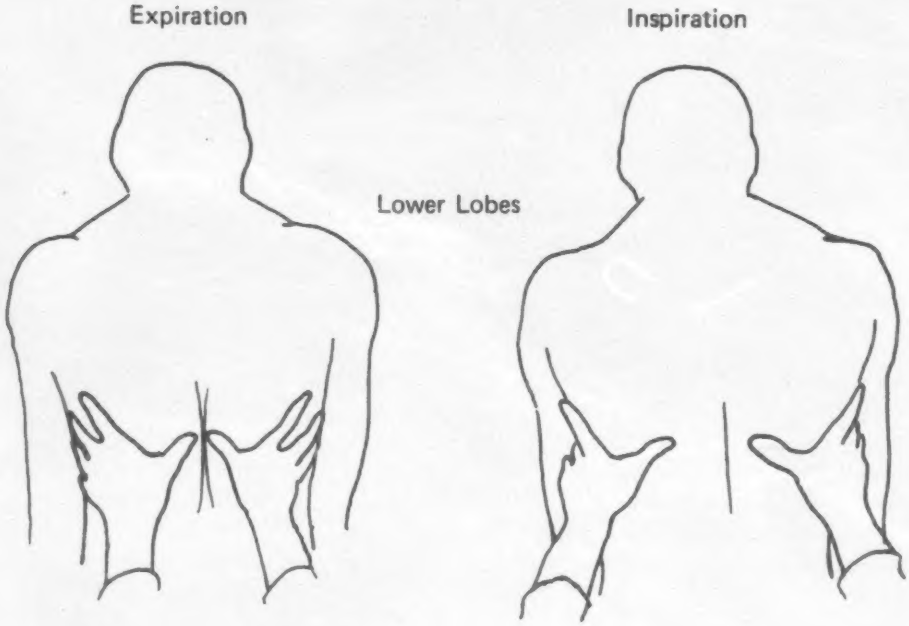
Symmetry of breathing: ____________________

____

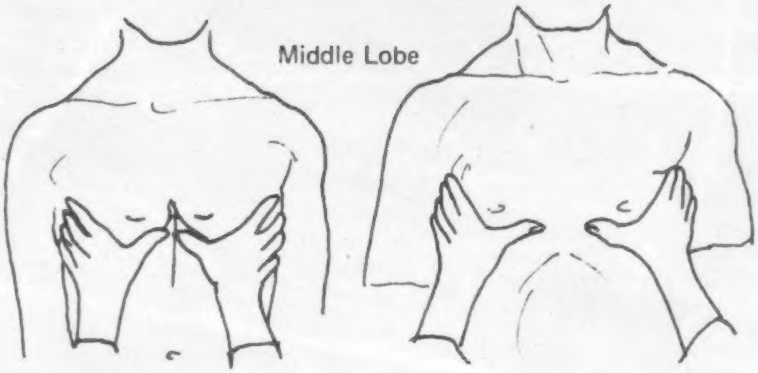
Palpation of chest

Begin by working your hands on the skin over the areas to be examined. At each area have the patient say "99" in a low voice.

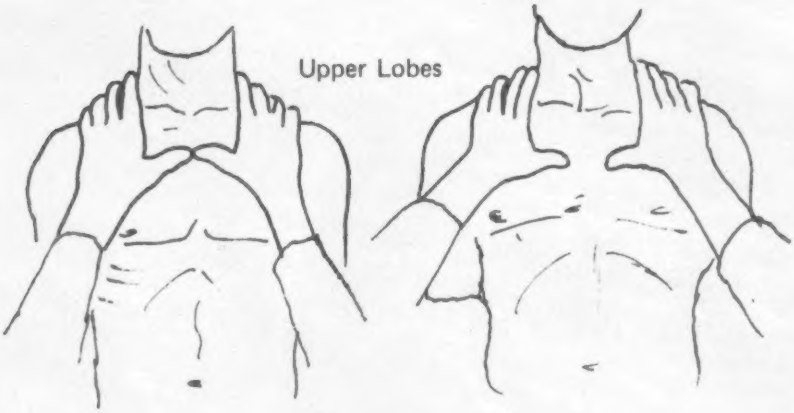
Indicate by marking on the following pictures where you hear fremitus.



ASSIGNMENT SHEET #1



Middle Lobe



Upper Lobes

Auscultation

(NOTE: The diaphragm of the stethoscope should be used to listen to sounds in the lungs. Begin by placing the diaphragm in the area above the scapula on the right side; then listen to the left side in the same place. Move down to the area over the scapula, then down to the lobes of the lung. Listen to the right, then left sides; compare what you hear. Ask patient to take deep breaths with the mouth open.)

Sounds heard:

Scapula: (above, middle, and below)____

____

Examples: Soft, loud, breezy quality, high-pitched

ASSIGNMENT SHEET #1

Extra sounds heard, and where ______________________________

____

____

ASSIGNMENT SHEET #1

PART II

Date: ______________

Patient's name or initials: ______________________________ Age: ______

Admitting diagnosis: ______________________________________

____

Medical history of lung disease, pneumonia, tuberculosis, asthma, or frequent colds?

____

____

Medical history of any cardiovascular disease? ______________________

____

Does patient smoke? ________________ Amount? ______________

Occupation? ______________________________________

Is there any pain, coughing, or difficulty in breathing at this time? ______________

____

Last chest X-ray? ______________________________________

Vital signs: Temp _____ P _____ R _____ B/P _____ Time taken: ________

Admission vital signs: Temp _____ P _____ R _____ B/P _____

General appearance

Color: ______________________________________

Behavior: ______________________________________

____

Position in bed or chair: ______________________________

____

Character of respirations

Muscles used in breathing: ______________________________

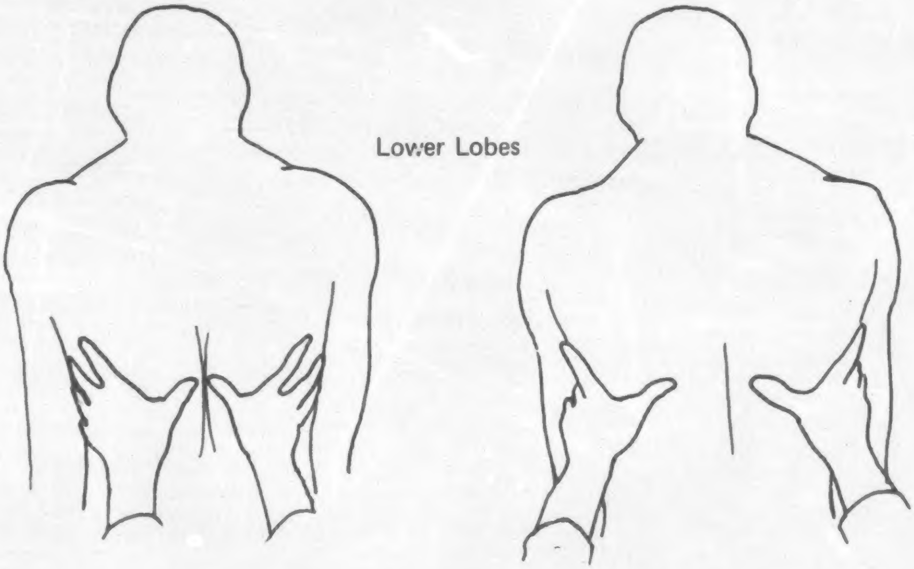
ASSIGNMENT SHEET #1

Palpation of chest

(NOTE: You can normally feel vibrations, known as fremitus, as the voice sounds. Distinct vibrations can be felt in various areas of the chest. The fremitus should feel like a soft buzzing, higher in the lobes, that almost diminishes to nothing in the lower lobes. If lungs are affected by atelectasis, pneumonia, tumor, or accumulated secretions, you will feel increased fremitus on the affected side. With emphysema or pneumothorax, the fremitus will be decreased over the area.)

Begin by working your hands on the skin over the areas to be examined. At each area have the patient say "99" in a low voice.

Indicate by marking on the following pictures where you hear fremitus.

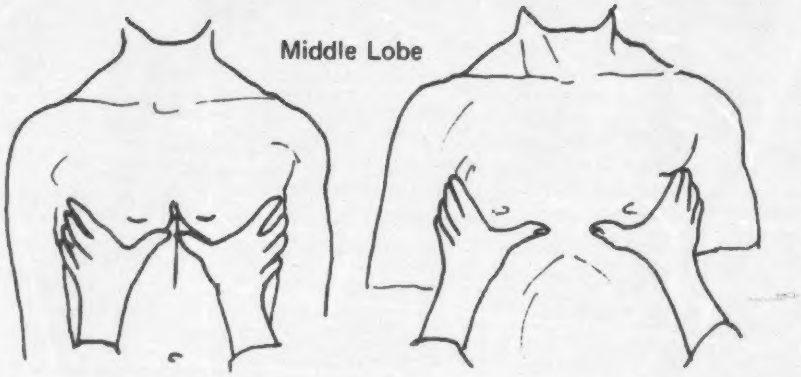


Expiration

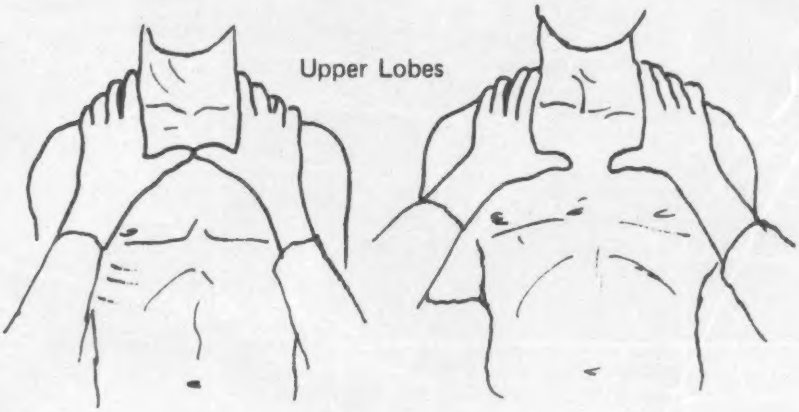
Lower Lobes

Inspiration

ASSIGNMENT SHEET #1



Middle Lobe



Upper Lobes

Auscultation

Sounds heard:

Scapula: (above, middle, and below)____

____

Lungs: (upper and lower lobes)____

____

ASSIGNMENT SHEET #1

Extra sounds heard, and where ____

____

____

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

JOB SHEET #1--ASSIST WITH BREATHING EXERCISES

I. Equipment--pillow or folded blanket

II. Procedure for deep breathing

   A. Wash hands

   B. Identify patient and explain procedure

   C. Position patient in one of two ways

      1. Assist patient to sitting position unless contraindicated

      2. Assist patient into supine position using only one pillow

   D. Support incision as needed with pillow or folded blanket

   E. Instruct patient to

      1. Breathe deeply five times, slowly and gently

      2. Inhale through the nose

      3. Exhale through the mouth

      4. Expel a sixth breath forcefully with a cough

   F. Provide for patient's comfort

   G. Wash hands

   H. Report and record procedure

JOB SHEET #1

III. Checklist for assisting with breathing exercises

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
B. Washed hands	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
C. Identified patient and explained procedure	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
D. Assisted patient in sitting position unless contraindicated; or assisted patient into supine position using only one pillow	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
E. Supported incision as needed with pillow or folded blanket	☐	☐

Comments: ______________________________

____

____

1254-C

JOB SHEET #1

		Performed well	Needs improvement
F.	Instructed patient to breathe deeply five times, slowly and gently	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
G.	Instructed patient to inhale through nose, and exhale through mouth	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
H.	Instructed patient to expel a sixth breath forcefully with a cough	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
I.	Provided for patient's comfort; washed hands	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		
J.	Reported and recorded procedure	☐	☐
	Comments: ______________________________ ______________________________ ______________________________		

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

JOB SHEET #2--SUCTION ORONASAL TRACT

I. Equipment

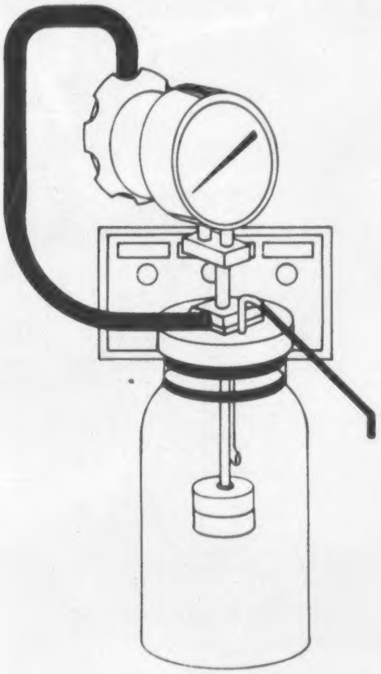
  A. Suction tip or catheter and Y-tube

  B. Container of water

  (NOTE: Suctioning of a small child or infant may be done with a bulb syringe.)

  C. Suction machine (Figure 1)

FIGURE 1



II. Procedure

  A. Wash hands

  B. Assemble and check equipment

  C. Identify patient and explain procedure

JOB SHEET #2

D. Place patient in supine position unless contraindicated

E. Turn on machine

F. Place suction tip in container of water

G. Cover air inlet with thumb to activate suction (Figure 2)

(NOTE: Water lubricates the catheter or suction tip and prevents secretions from adhering to the side of the suction bottle.)

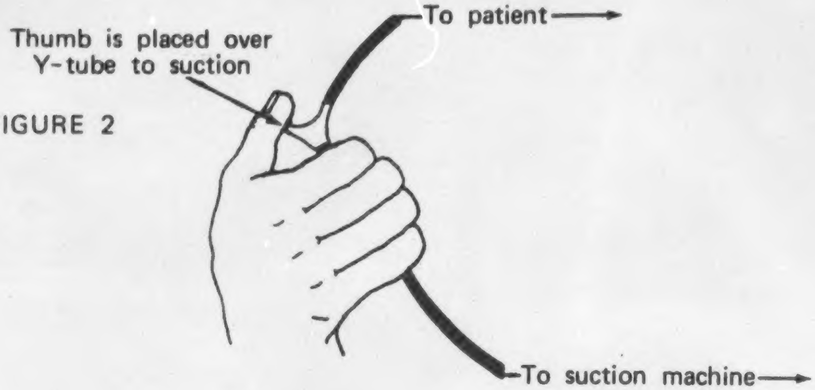


FIGURE 2

H. Clamp off suction tubing or remove thumb from air inlet to inactivate suction while inserting tip

I. Insert suction tip or catheter three-five inches through the nose or mouth into the pharyngeal cavity

J. Place thumb over air inlet and suction for 10 seconds, rotating the tip as it is withdrawn

(NOTE: Thumb on, suction on. Thumb off, suction off.)

K. Place tip in water and activate suction to clean tubing

L. Repeat suctioning as necessary to clear passages

M. Observe suction bottle frequently

(**CAUTION**: Do not allow suction bottle to fill more than indicated, usually about three-fourths full. Overfilling the bottle will cause fluid to be drawn into the motor.)

JOB SHEET #2

N. Turn off machine

O. Discard suction tip

P. Empty suction bottle and replenish supplies

Q. Wash hands

R. Record procedure including

  1. Time
  2. Amount and character of secretions
  3. Reaction of patient
  4. Observations

(NOTE: Suctioning equipment is usually left at the patient's bedside. At termination of its use, clean and return equipment to proper place. If disposable equipment is used, follow manufacturer's instructions.)

JOB SHEET #2

III. Checklist for suctioning oronasal tract

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
B. Washed hands; assembled and checked equipment	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
C. Identified patient and explained procedure	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
D. Placed patient in supine position unless contraindicated	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
E. Turned on machine	☐	☐

Comments: ____________________

____

____

JOB SHEET #2

		Performed well	Needs improvement
F.	Placed suction tip in container of water	☐	☐
	Comments: ______________________________		
G.	Covered air inlet with thumb to activate suction	☐	☐
	Comments: ______________________________		
H.	Clamped off suction tubing or removed thumb from air inlet to inactivate suction while inserting tip	☐	☐
	Comments: ______________________________		
I.	Inserted suction tip or catheter three-five inches through the nose or mouth into the pharyngeal cavity	☐	☐
	Comments: ______________________________		
J.	Placed thumb over air inlet and suction for 10 seconds, rotated the tip as it was withdrawn	☐	☐
	Comments: ______________________________		

JOB SHEET #2

	Performed well	Needs improvement
K. Placed tip in water and activated suction to clean tubing	☐	☐
Comments: ________________________________		
L. Repeated suctioning as necessary to clear passages	☐	☐
Comments: ________________________________		
M. Observed suction bottle frequently	☐	☐
Comments: ________________________________		
N. Turned off machine; discarded suction tip	☐	☐
Comments: ________________________________		
O. Emptied suction bottle and replenished supplies	☐	☐
Comments: ________________________________		

JOB SHEET #2

		Performed well	Needs improvement
P.	Washed hands	☐	☐
	Comments:		
Q.	Recorded procedure including time, amount and character of secretions, reaction of patient, and observations	☐	☐
	Comments:		

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

JOB SHEET #3--ASSIST WITH POSTURAL DRAINAGE

(NOTE: This procedure should not be done immediately after meals.)

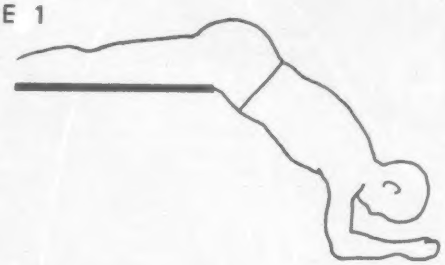
I. Equipment
   - A. Emesis basin
   - B. Tissue wipes
   - C. Additional cover as needed
   - D. Pillows or chair as needed

II. Procedure
   - A. Check physician's order for details of treatment
   - B. Wash hands
   - C. Identify patient and provide privacy
   - D. Instruct patient concerning the purpose, position, and effects of the procedure
   - E. Administer medication if prescribed
   - F. Drape patient
   - G. Position patient, keeping spine straight; provide support as needed
     - 1. Position 1 (Figure 1)
       - a. Place patient in prone position across the bed with hips at the edge of the bed
       - b. Place upper body at 45-degree angle

JOB SHEET #3

c. Support as needed with chair, pillows, or folded towel under patient's forehead and arms

FIGURE 1

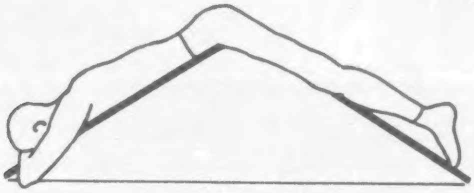


2. Position 2 (Figure 2)

   a. Place patient in prone position facing the foot of the bed with hips at the knee break

   b. Elevate the bed so that body is in a 45-degree angle position

FIGURE 2

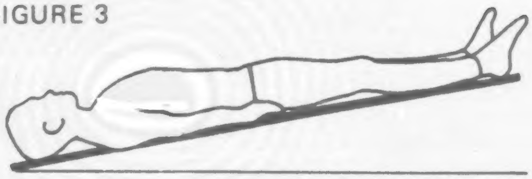


3. Position 3 (Figure 3)

   a. Place patient in level position

   b. Elevate the foot of the bed 18 inches

FIGURE 3



JOB SHEET #3

4. Positions 4 and 5 (Figures 4 and 5)
   a. Place patient on side opposite lung area to be treated
   b. Elevate the foot of the bed 18 inches

FIGURE 4

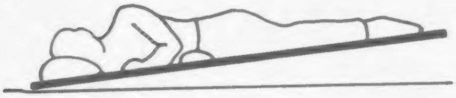
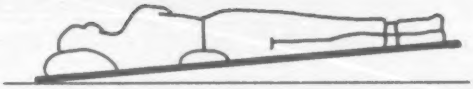


FIGURE 5



H. Provide additional cover as needed for warmth

I. Place emesis basin and tissue wipes for patient's convenience

J. Percuss or vibrate the chest wall as prescribed

(NOTE: In most health care institutions, a physical therapist or respiratory therapist is responsible for these actions. If it is part of the nurse's responsibility, special instructions for these procedures will be necessary.)

K. Observe patient's skin color and pulse rate frequently

(NOTE: In some instances it may be necessary for a health care worker to remain with the patient throughout the treatment.)

L. Treatment is continued as prescribed, usually for 15-20 minutes, four times per day

M. Position patient for comfort after prescribed time of treatment

N. Assist patient with mouth care

JOB SHEET #3

O. Provide for patient's comfort

(NOTE: Patient is usually instructed to rest in bed for 30 minutes following the procedure.)

P. Replace equipment

Q. Wash hands

R. Record and report procedures including

1. Medication
2. Position
3. Length of time
4. Description of secretions
5. Tolerance
6. Skin color and pulse rate

JOB SHEET #3

III. Checklist for assisting with postural drainage

Performed well Needs improvement

A. Gathered necessary equipment ☐ ☐

Comments: ______________________________

____

____

B. Checked physician's order for details of treatment ☐ ☐

Comments: ______________________________

____

____

C. Washed hands ☐ ☐

Comments: ______________________________

____

____

D. Identified patient and provided privacy ☐ ☐

Comments: ______________________________

____

____

E. Instructed patient concerning the purpose, position, and effects of procedure ☐ ☐

Comments: ______________________________

____

____

JOB SHEET #3

		Performed well	Needs improvement
F.	Administered medication if prescribed	☐	☐
	Comments: ____________________ ____________________ ____________________		
G.	Draped patient	☐	☐
	Comments: ____________________ ____________________ ____________________		
H.	Positioned patient, kept spine straight; provided support as needed	☐	☐
	Comments: ____________________ ____________________ ____________________		
I.	For position one, placed in prone position across bed with hips at edge of bed	☐	☐
	Comments: ____________________ ____________________ ____________________		
J.	Placed upper body at 45-degree angle	☐	☐
	Comments: ____________________ ____________________ ____________________		

JOB SHEET #3

		Performed well	Needs improvement
K.	Supported as needed with chair, pillows, or folded towel under patient's forehead and arms	☐	☐

Comments: ____

____

____

L.	For position two, placed patient in prone position facing the foot of bed with hips at knee break	☐	☐

Comments: ____

____

____

M.	Elevated bed so that body was in a 45-degree angle position	☐	☐

Comments: ____

____

____

N.	For position three, placed patient in level position; elevated foot of bed 18 inches	☐	☐

Comments: ____

____

____

O.	For positions four and five, placed patient on side opposite lung area to be treated; elevated foot of bed 18 inches	☐	☐

Comments: ____

____

____

JOB SHEET #3

		Performed well	Needs improvement
P.	Provided additional cover as needed for warmth	☐	☐
	Comments: ____________________ ____________________ ____________________		
Q.	Placed emesis basin and tissue wipes for patient's convenience	☐	☐
	Comments: ____________________ ____________________ ____________________		
R.	Percussed or vibrated the chest wall as prescribed	☐	☐
	Comments: ____________________ ____________________ ____________________		
S.	Observed patient's skin color and pulse rate frequently	☐	☐
	Comments: ____________________ ____________________ ____________________		
T.	Continued treatment as prescribed, usually 15-20 minutes, four times per day	☐	☐
	Comments: ____________________ ____________________ ____________________		

JOB SHEET #3

		Performed well	Needs improvement
U.	Positioned patient for comfort after prescribed time of treatment	☐	☐
	Comments: ____________________ ____________________ ____________________		
V.	Assisted patient with mouth care	☐	☐
	Comments: ____________________ ____________________ ____________________		
W.	Provided for patient's comfort	☐	☐
	Comments: ____________________ ____________________ ____________________		
X.	Replaced equipment; washed hands	☐	☐
	Comments: ____________________ ____________________ ____________________		
Y.	Recorded and reported procedures including medication, position, length of time, description of secretions, tolerance, skin color, and pulse rate	☐	☐
	Comments: ____________________ ____________________ ____________________		

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

JOB SHEET #4--COLLECT A SPUTUM SPECIMEN

(NOTE: If patient is unable to produce a sputum specimen by coughing, it may be obtained by suction catheter.)

I. Equipment

   A. Sputum container with cover

   B. Label

   C. Laboratory requisition

II. Procedure

   A. Check physician's orders

   B. Fill out label on container and requisition

   C. Wash hands

   D. Identify patient and explain procedure

   (NOTE: Explain that sputum is mucus coughed up from the lungs, and not saliva in the mouth. Also, explain the importance of keeping the mouth clean after eating to avoid contamination of the specimen with particles of food.)

   E. Place sputum container with cover at bedside

   F. Leave container at bedside until sufficient sputum is collected, or for a 24-hour period, whichever is specified in physician's orders

   G. Seal container with cover at specified time

   (NOTE: Be very careful in handling container as microorganisms can cling to container.)

   H. Wash and dry outside of container

   I. Wash hands

   J. Take or send specimen to laboratory

   K. Report and record procedure

   (NOTE: Follow manufacturer's instructions for use of containers.)

JOB SHEET #4

III. Checklist for collecting a sputum specimen

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments:		
B.	Checked physician's orders	☐	☐
	Comments:		
C.	Filled out label on container and requisition	☐	☐
	Comments:		
D.	Washed hands	☐	☐
	Comments:		
E.	Identified patient and explained procedure	☐	☐
	Comments:		
F.	Placed sputum container with cover at bedside	☐	☐
	Comments:		

JOB SHEET #4

		Performed well	Needs improvement
G.	Left container at bedside until sufficient sputum was collected, or for a 24-hour period, whichever was specified in physician's orders	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
H.	Sealed container with cover at specified time	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
I.	Washed and dried outside of container	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
J.	Washed hands	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
K.	Took or sent specimen to laboratory	☐	☐

Comments: ____________________

____

____

JOB SHEET #4

	Performed well	Needs improvement
L. Reported and recorded procedure	☐	☐

Comments: ______________________________

____

____

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

JOB SHEET #5--USE AN OXYGEN CYLINDER

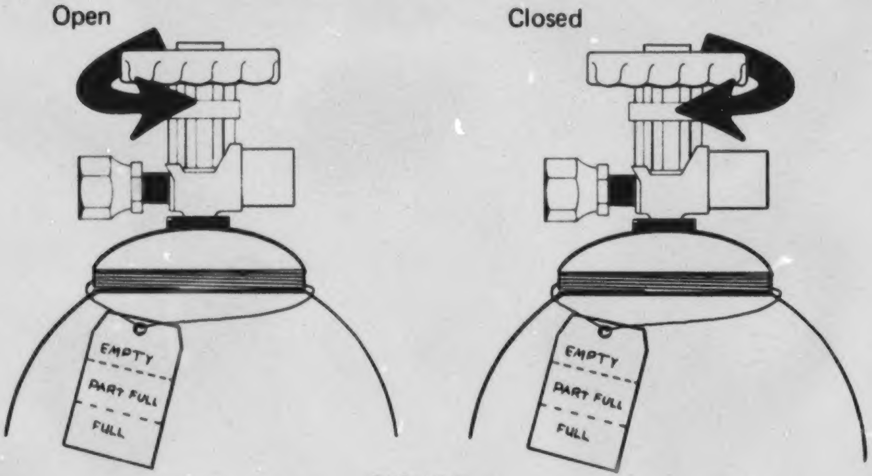
I. Equipment

- A. Cylinder of oxygen
- B. Regulator
- C. Wrench
- D. Humidifier
- E. Tubing

II. Procedure to prepare for use

- A. Assemble equipment
- B. Remove protective cap from cylinder
- C. Open cylinder valve slightly for a very short time (Figure 1)

  (NOTE: This is called "cracking" the valve. It blows out any dust particles which may have collected.)


Open

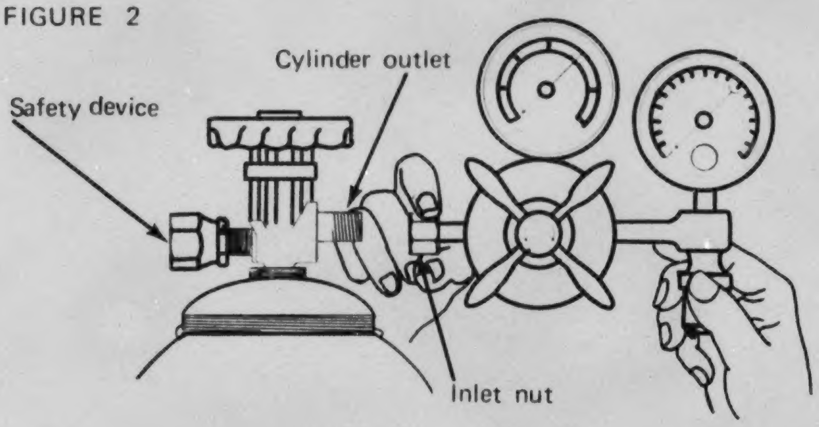
Closed

FIGURE 1

JOB SHEET #5

D. Connect regulator to cylinder outlet on cylinder valve (Figure 2)

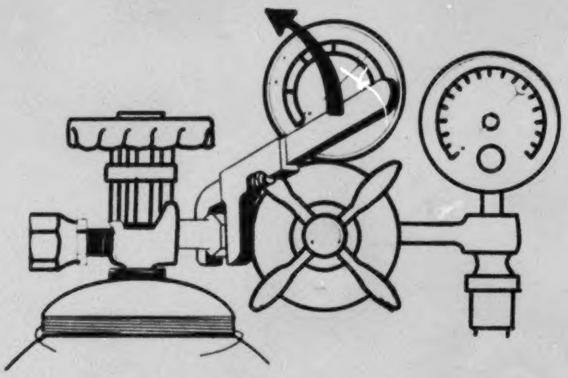
FIGURE 2


Cylinder outlet
Safety device
Inlet nut

E. Tighten inlet nut with wrench (Figure 3)

(NOTE: Wrench is usually fastened to oxygen carrier with chain.)

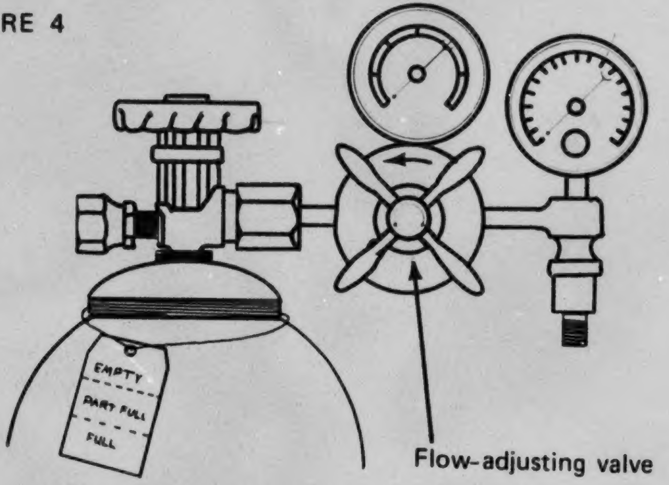
FIGURE 3



JOB SHEET #5

F. Turn flow-adjusting valve to "OFF" position (Figure 4)

FIGURE 4


EMPTY
PART FULL
FULL
Flow-adjusting valve

G. Remove cover from humidifier

H. Fill humidifier with distilled water to indicated water level

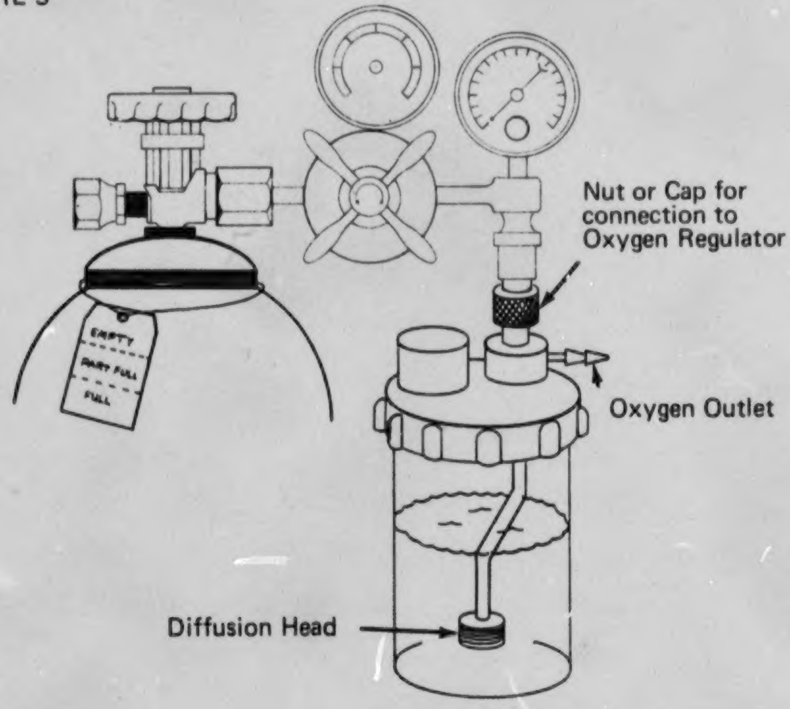
(NOTE: If there is no water level mark, fill humidifier half full.)

I. Replace cover on humidifier

JOB SHEET #5

J. Attach humidifier to regulator (Figure 5)

FIGURE 5

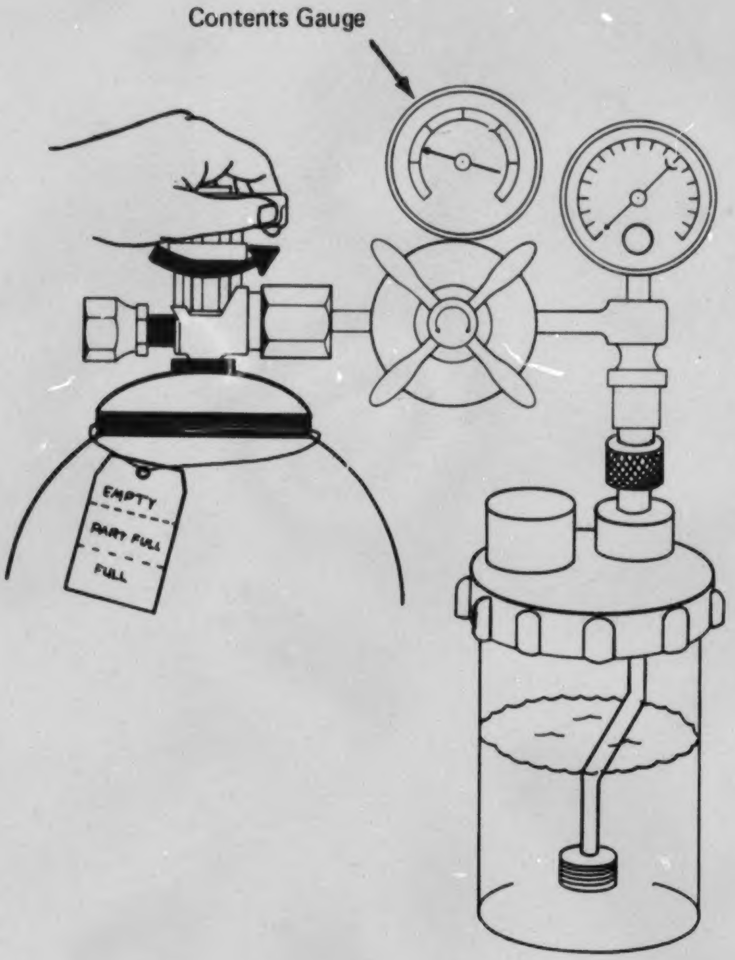

EMPTY
PART FULL
FULL
Nut or Cap for connection to Oxygen Regulator
Oxygen Outlet
Diffusion Head

K. Attach tubing to oxygen outlet

JOB SHEET #5

L. Open cylinder valve very slowly to avoid damaging regulator (Figure 6)

FIGURE 6


Contents Gauge
EMPTY
PART FULL
FULL

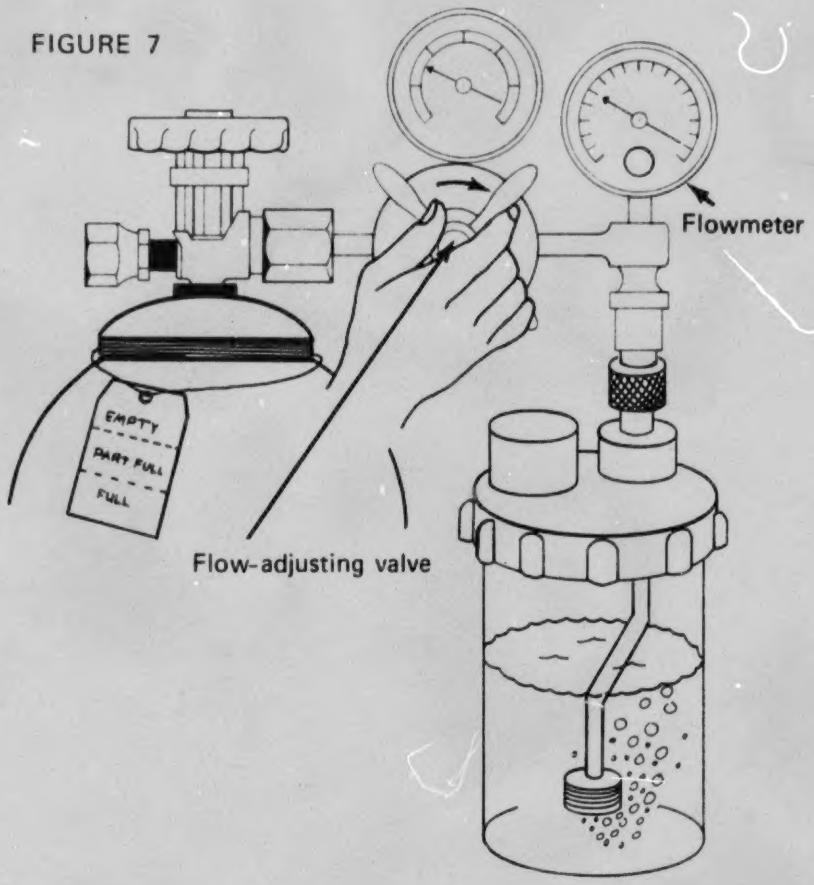
JOB SHEET #5

M. Turn flow-adjusting valve to "ON" position

N. Continue turning flow-adjusting valve until flowmeter registers the prescribed number of liters per minute (Figure 7)

(NOTE: Cylinder and regulator are now ready for use.)

FIGURE 7



III. Procedure to discontinue use

(NOTE: Follow this procedure when oxygen use is to be discontinued for 30 minutes or more and/or when the regulator is to be removed from the cylinder.)

A. Close cylinder valve tightly

B. Wait until flowmeter and cylinder contents gauge have returned to zero

C. Close flow-adjusting valve

JOB SHEET #5

D. Remove humidifier

E. Loosen inlet nut with wrench

F. Remove regulator

G. Replace protective cap

H. Clean equipment and return to proper place

JOB SHEET #5

IV. Checklist for preparing an oxygen cylinder for use

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
B. Assembled equipment and removed protective cap from cylinder	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
C. Opened cylinder valve slightly for a very short time	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
D. Connected regulator to cylinder outlet on cylinder valve	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
E. Tightened inlet nut with wrench	☐	☐
Comments: ______________________________ ______________________________ ______________________________		

JOB SHEET #5

		Performed well	Needs improvement
F.	Turned flow-adjusting valve to "OFF" position	☐	☐
	Comments: ____________________		
G.	Removed cover from humidifier	☐	☐
	Comments: ____________________		
H.	Filled humidifier with distilled water to indicated water level	☐	☐
	Comments: ____________________		
I.	Replaced cover on humidifier	☐	☐
	Comments: ____________________		
J.	Attached humidifier to regulator	☐	☐
	Comments: ____________________		
K.	Attached tubing to oxygen outlet	☐	☐
	Comments: ____________________		

JOB SHEET #5

	Performed well	Needs improvement
L. Opened cylinder valve very slowly to avoid damaging regulator	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
M. Turned flow-adjusting valve to "ON" position	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
N. Continued turning flow-adjusting valve until flowmeter registered prescribed number of liters per minute	☐	☐

Comments: ______________________________

____

____

V. Checklist for discontinuing use

	Performed well	Needs improvement
A. Closed cylinder valve tightly	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
B. Waited until flowmeter and cylinder contents gauge returned to zero	☐	☐

Comments: ______________________________

____

____

JOB SHEET #5

		Performed well	Needs improvement
C.	Closed flow-adjusting valve	☐	☐
	Comments:		
D.	Removed humidifier	☐	☐
	Comments:		
E.	Loosened inlet nut with wrench	☐	☐
	Comments:		
F.	Removed regulator	☐	☐
	Comments:		
G.	Replaced protective cap	☐	☐
	Comments:		
H.	Cleaned equipment and returned to proper place	☐	☐
	Comments:		

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

JOB SHEET #6--USE PIPED-IN OXYGEN UNIT

I. Equipment

A. Flowmeter

B. Humidifier

C. Tubing

II. Procedure to prepare for use

A. Assemble equipment

B. Remove cover on humidifier

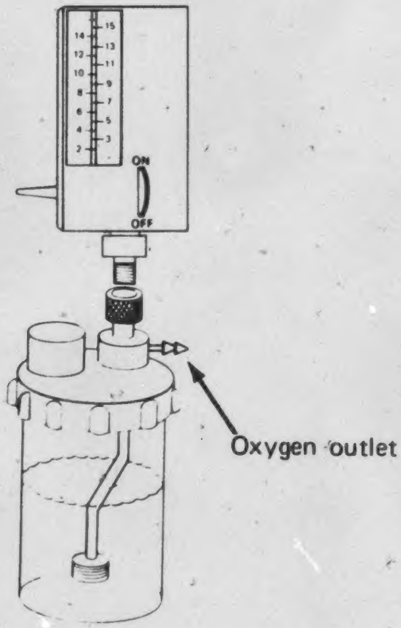
C. Fill humidifier with distilled water to prescribed level

(NOTE: If there is no water-level mark, fill humidifier half full.)

D. Replace cover on humidifier

E. Attach humidifier to flowmeter (Figure 1)

FIGURE 1

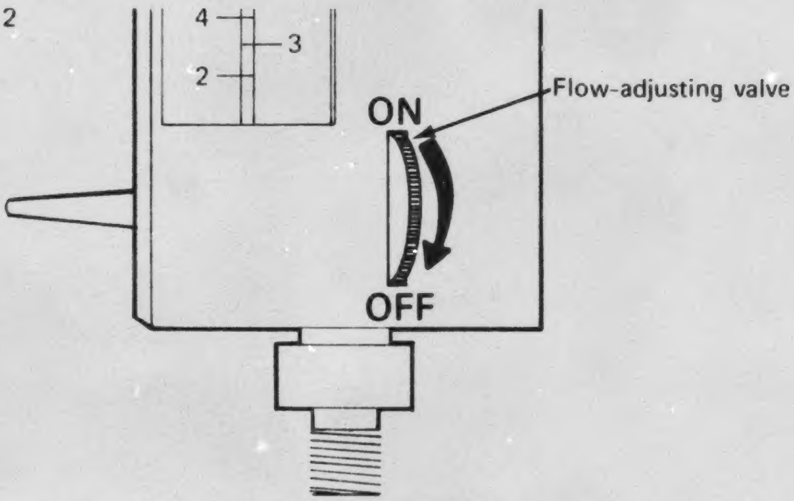


F. Take equipment to patient's unit

JOB SHEET #6

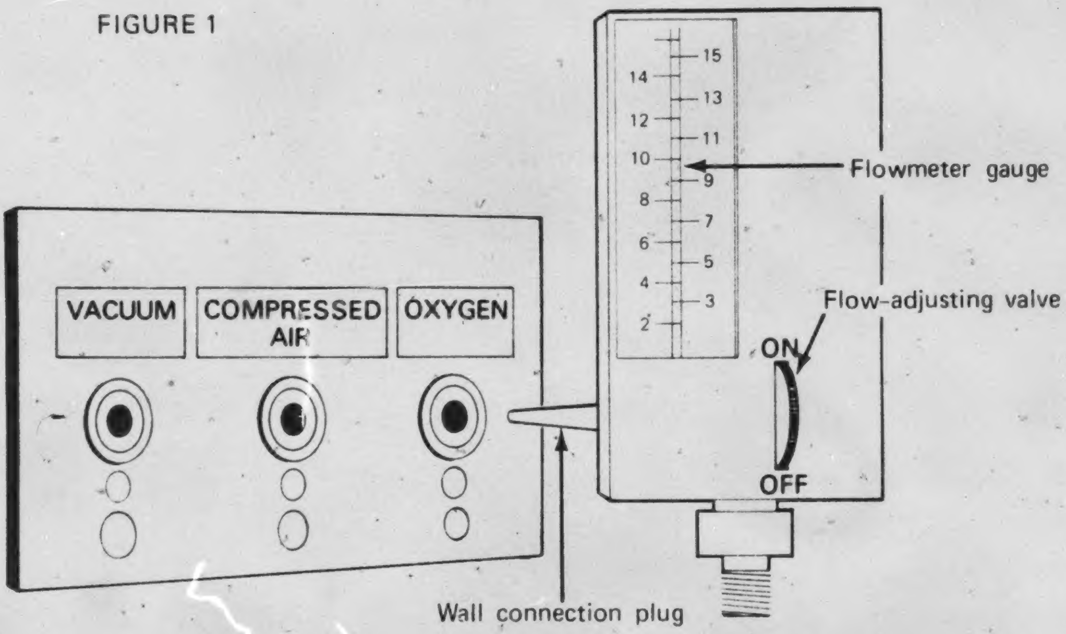
G. Turn flow-adjusting valve to "OFF" position (Figure 2)

FIGURE 2


4
3
2
Flow-adjusting valve
ON
OFF

H. Insert flowmeter adapter into opening of outlet, pressing firmly to secure until it snaps into place (Figure 3)

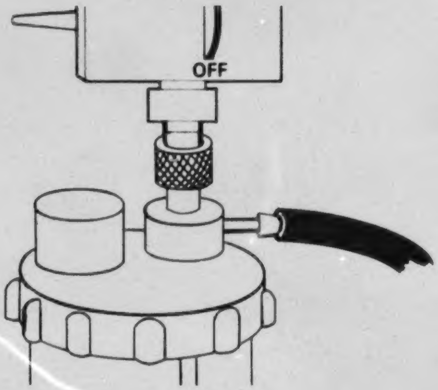
FIGURE 1


15
14
13
12
11
10
9
8
7
6
5
4
3
2
Flowmeter gauge
Flow-adjusting valve
ON
OFF
VACUUM
COMPRESSED AIR
OXYGEN
Wall connection plug

JOB SHEET #6

I. Attach tubing to oxygen outlet (Figure 4)

FIGURE 4



J. Slowly open flow-adjusting valve until desired flow is obtained

(NOTE: Oxygen is now ready for use.)

III. Procedure to discontinue use

A. Turn flow-adjusting valve to "OFF"

B. Wait until gauge drops to zero

C. Remove flowmeter from outlet by releasing locking mechanism

D. Clean equipment and return to proper place

JOB SHEET #6

IV. Checklist for using piped-in oxygen unit

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______		
B. Assembled equipment; removed cover on humidifier	☐	☐
Comments: ______		
C. Filled humidifier with distilled water to prescribed level	☐	☐
Comments: ______		
D. Replaced cover on humidifier	☐	☐
Comments: ______		
E. Attached humidifier to flowmeter	☐	☐
Comments: ______		

JOB SHEET #6

		Performed well	Needs improvement
F.	Took equipment to patient's unit	☐	☐

Comments: ______________________________

____

____

G.	Turned flow-adjusting valve to "OFF" position	☐	☐

Comments: ______________________________

____

____

H.	Inserted flowmeter adapter into opening of outlet, pressed firmly to secure until it snapped into place	☐	☐

Comments: ______________________________

____

____

I.	Attached tubing to oxygen outlet	☐	☐

Comments: ______________________________

____

____

J.	Slowly opened flow-adjusting valve until desired flow was obtained	☐	☐

Comments: ______________________________

____

____

JOB SHEET #6

V. Checklist for discontinuing use

	Performed well	Needs improvement
A. Turned flow-adjusting valve to "OFF"	☐	☐
Comments: ______		
B. Waited until gauge dropped to zero	☐	☐
Comments: ______		
C. Removed flowmeter from outlet by releasing locking mechanism	☐	☐
Comments: ______		
D. Cleaned equipment and returned to proper place	☐	☐
Comments: ______		

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

JOB SHEET #7--USE A NASAL CANNULA

I. Equipment

- A. Oxygen setup

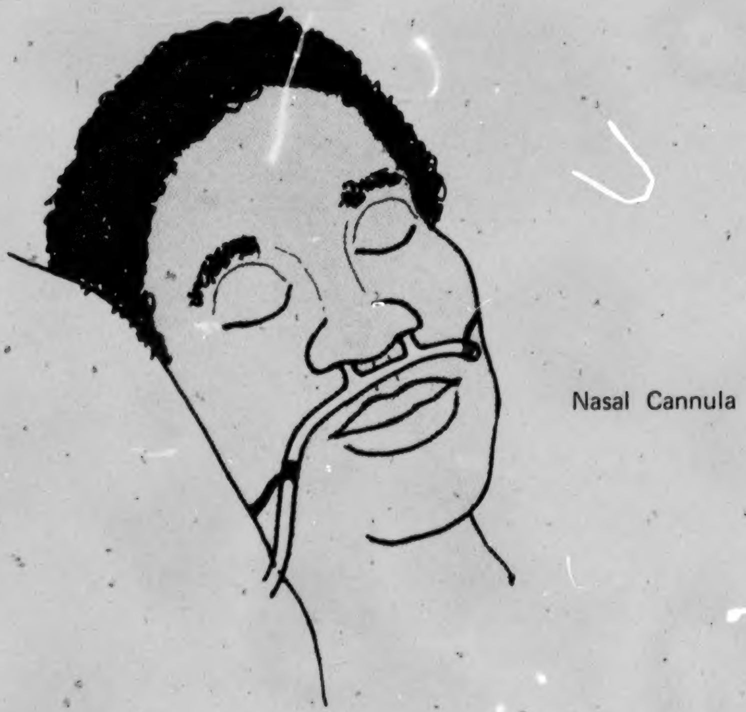
  (NOTE: Prepare oxygen setup using instructions on Job Sheet #1 or #2.)

- B. Nasal cannula

II. Procedure

- A. Check physician's order for details
- B. Wash hands
- C. Assemble equipment and take to patient's unit
- D. Identify patient and explain procedure
- E. Start flow of oxygen at about three liters
- F. Apply nasal cannula and adjust for patient's comfort (Figure 1)

FIGURE 1



JOB SHEET #7

- G. Adjust rate of flow to prescribed number of liters per minute
- H. Check frequently for
  1. Cannula position
  2. Rate of oxygen flow
  3. Water level in humidifier
  4. Patency of tubing
  5. Leaks in connections
  6. Quantity of oxygen remaining in cylinders
- I. Remove and clean cannula at least once every eight hours
- J. Record and report
  1. Time
  2. Rate of flow
  3. Patient response

III. Procedure to discontinue use

- A. Remove nasal cannula
- B. Shut off oxygen supply
- C. Clean and return equipment to proper place
- D. Record time oxygen is discontinued

PN I - 1301-C

JOB SHEET #7

IV. Checklist for using a nasal cannula

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________________		
B. Checked physician's order for details	☐	☐
Comments: ______________________		
C. Washed hands	☐	☐
Comments: ______________________		
D. Assembled equipment and took to patient's unit	☐	☐
Comments: ______________________		
E. Identified patient and explained procedure	☐	☐
Comments: ______________________		
F. Started flow of oxygen at about three liters	☐	☐
Comments: ______________________		

JOB SHEET #7

		Performed well	Needs improvement
G.	Applied nasal cannula and adjusted for patient's comfort	☐	☐

Comments:

H.	Adjusted rate of flow to prescribed number of liters per minute	☐	☐

Comments:

I.	Checked frequently for cannula position, rate of oxygen flow, water level in humidifier, patency of tubing, leaks in connections, and quantity of oxygen remaining in cylinders	☐	☐

Comments:

J.	Removed and cleaned cannula at least once every eight hours	☐	☐

Comments:

K.	Recorded and reported time, rate of flow, and patient response	☐	☐

Comments:

JOB SHEET #7

		Performed well	Needs improvement
L.	To discontinue use, removed nasal cannula and shut off oxygen supply	☐	☐
	Comments: ________________		
M.	Cleaned and returned equipment to proper place	☐	☐
	Comments: ________________		
N.	Recorded time oxygen was discontinued	☐	☐
	Comments: ________________		

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

JOB SHEET #8--INSERT A NASAL CATHETER

I. Equipment

   A. Oxygen setup

   (NOTE: Prepare oxygen setup using instructions on Job Sheet #5 or #6.)

   B. Nasal catheter

   C. Tape

   D. Safety pin

   E. Connector

   F. Glass of water

   G. Tongue depressor

   H. Flashlight

II. Procedure

   A. Check physician's order

   B. Wash hands

   C. Assemble equipment and take to patient's unit

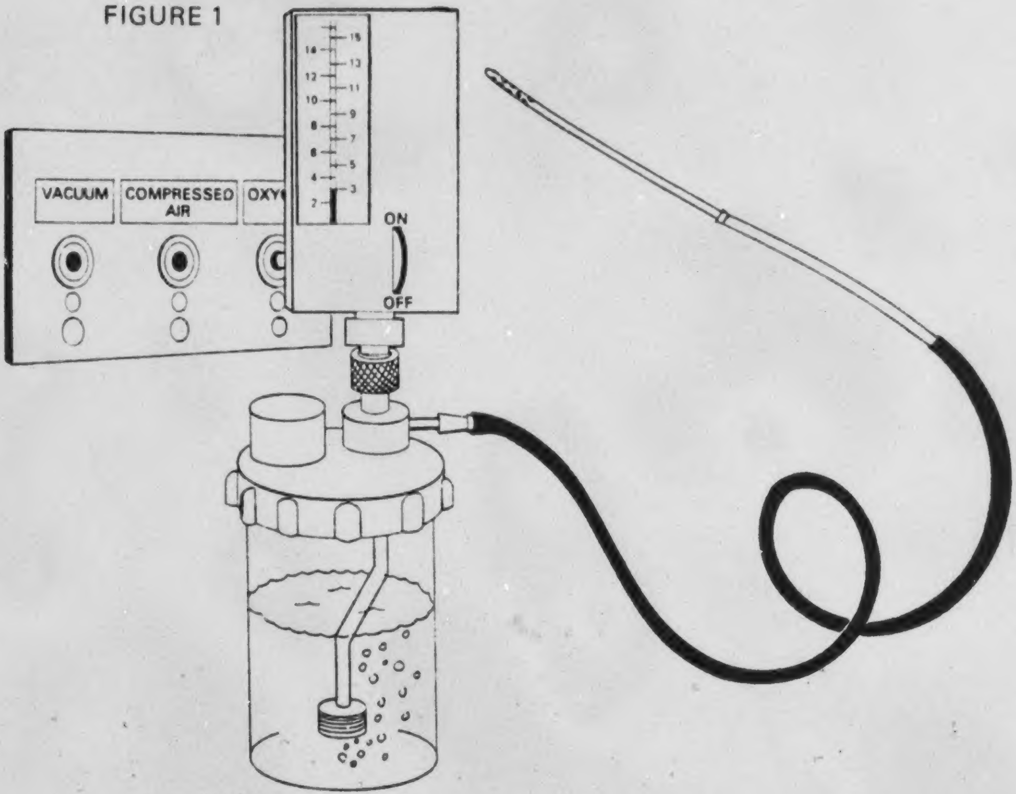
   D. Identify patient and explain procedure

   E. Connect the catheter to the tubing, using the connector

JOB SHEET #8

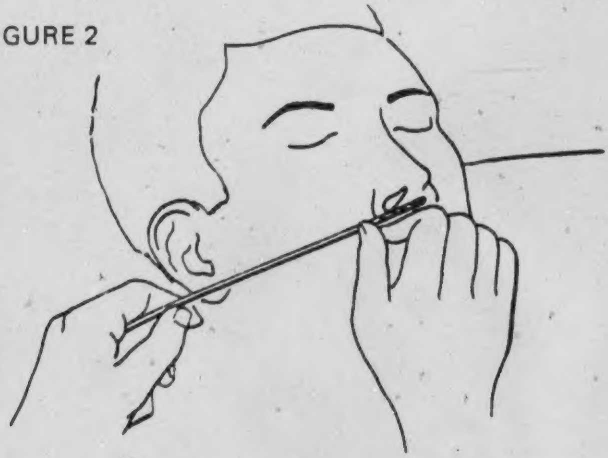
F. Start the oxygen flow at approximately three liters (Figure 1)

FIGURE 1


VACUUM
COMPRESSED AIR
OXY
15
14
13
12
11
10
9
8
7
6
5
4
3
2
ON
OFF

G. Determine the approximate depth to which the catheter is to be inserted by measuring the distance from the tip of the nose to the ear lobe (Figure 2)

FIGURE 2



JOB SHEET #8

H. Place the tip of the catheter in a glass of water to make certain the oxygen is flowing through it and to moisten it (Figure 3)

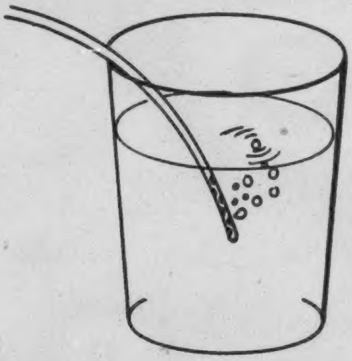


FIGURE 3

I. Determine the natural droop of the catheter by holding it between the thumb and forefinger; rotate it slowly until the tip hangs at its lowest level (Figure 4)

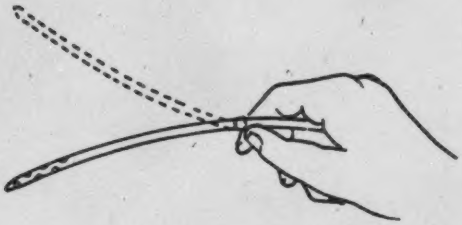


FIGURE 4

J. Slowly and gently insert the catheter to the measured depth (Figure 5)

(NOTE: It will be easier to insert the catheter if the tip of the patient's nose is elevated as in Figure 5. Do not force the catheter if any obstruction is met.)

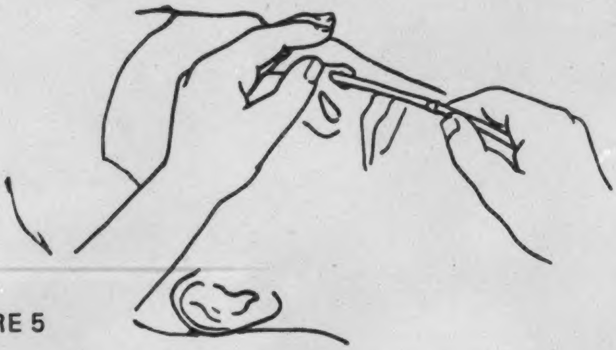


FIGURE 5

JOB SHEET #8

K. Use a tongue depressor and flashlight to check the position of the catheter through the patient's open mouth (Figure 6)

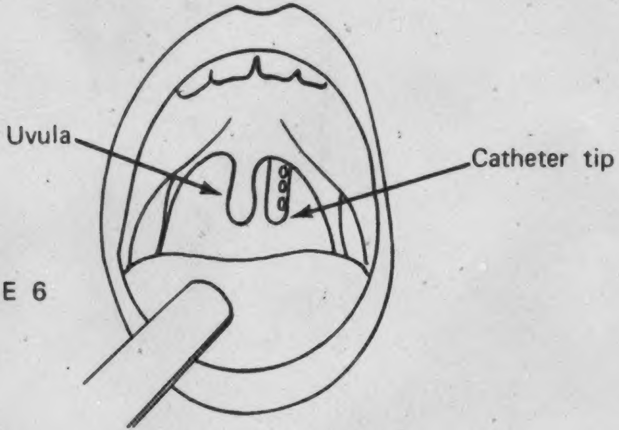


FIGURE 6

L. Withdraw catheter slightly (Figure 7)

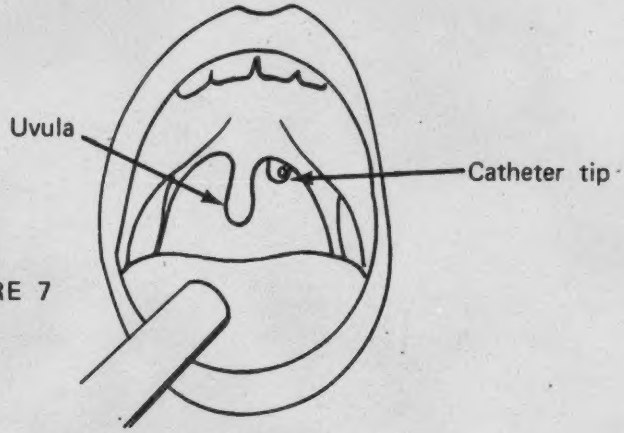


FIGURE 7

M. Fasten catheter in place with tape

N. Adjust the rate of flow to prescribed number of liters

O. Secure tubing to the bedclothes with a safety pin

P. Check the tubing to see that it is not twisted

(NOTE: A whistle indicates oxygen flow is obstructed.)

Q. Leave enough slack in the tubing so that the patient can move about

R. Insert a fresh catheter every eight hours, alternating nostrils if possible; remove catheter gently

JOB SHEET #8

S. Check frequently for

   1. Position of the nasal catheter
   2. Rate of flow of oxygen
   3. Water level in the humidifier
   4. Patency of tubing
   5. Leaks in connections
   6. Quantity of oxygen remaining in cylinders

T. Record and report

   1. Time
   2. Rate of flow
   3. Patient response

III. Procedure to discontinue use

A. Remove nasal catheter gently

B. Shut off oxygen supply

C. Clean and return equipment to proper place

D. Record time oxygen is discontinued

JOB SHEET #8

IV. Checklist for inserting a nasal catheter

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
B. Checked physician's order	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
C. Washed hands	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
D. Assembled equipment and took to patient's unit	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
E. Identified patient and explained procedure	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
F. Connected catheter to tubing, using connector	☐	☐

Comments: ____________________

____

____

JOB SHEET #8

		Performed well	Needs improvement
G.	Started oxygen flow at approximately three liters	☐	☐

Comments: ______________________________

H.	Determined approximate depth to which catheter was to be inserted by measuring distance from tip of nose to ear lobe	☐	☐

Comments: ______________________________

I.	Placed tip of catheter in a glass of water to make certain the oxygen was flowing through it and to moisten it	☐	☐

Comments: ______________________________

J.	Determined natural droop of catheter by holding it between thumb and forefinger; rotated it slowly until tip hung at its lowest level	☐	☐

Comments: ______________________________

JOB SHEET #8

		Performed well	Needs improvement
K.	Slowly and gently inserted the catheter to measured depth	☐	☐
	Comments: ____________________ ____________________ ____________________		
L.	Used a tongue depressor and flashlight and checked the position of the catheter through patient's open mouth	☐	☐
	Comments: ____________________ ____________________ ____________________		
M.	Withdrew catheter slightly	☐	☐
	Comments: ____________________ ____________________ ____________________		
N.	Fastened catheter in place with tape	☐	☐
	Comments: ____________________ ____________________ ____________________		
O.	Adjusted rate of flow to prescribed number of liters	☐	☐
	Comments: ____________________ ____________________ ____________________		

JOB SHEET #8

		Performed well	Needs improvement
P.	Secured tubing to bedclothes with a safety pin	☐	☐
	Comments: ______________________________		
Q.	Checked tubing to see that it was not twisted	☐	☐
	Comments: ______________________________		
R.	Left enough slack in tubing so that patient could move about	☐	☐
	Comments: ______________________________		
S.	Inserted a fresh catheter every eight hours, alternating nostrils if possible; removed catheter gently	☐	☐
	Comments: ______________________________		
T.	Checked frequently for position of nasal catheter, rate of flow of oxygen, water level in humidifier, patency of tubing, leaks in connections, and quantity of oxygen remaining in cylinders	☐	☐
	Comments: ______________________________		

JOB SHEET #8

		Performed well	Needs improvement
U.	Recorded and reported time, rate of flow, and patient response	☐	☐
	Comments: ____________________ ____________________ ____________________		
V.	To discontinue use, removed nasal catheter gently; shut off oxygen supply	☐	☐
	Comments: ____________________ ____________________ ____________________		
W.	Cleaned and returned equipment to proper place	☐	☐
	Comments: ____________________ ____________________ ____________________		
X.	Recorded time oxygen was discontinued	☐	☐
	Comments: ____________________ ____________________ ____________________		

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

JOB SHEET #9--USE AN OXYGEN MASK

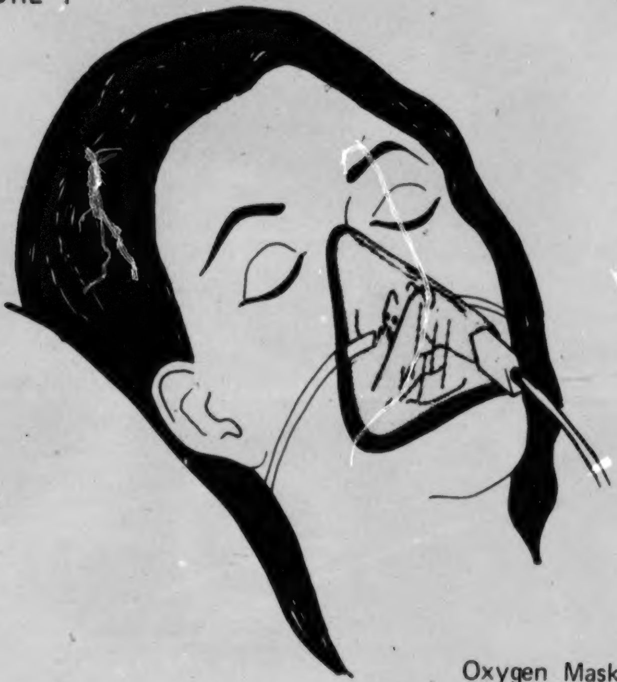
I. Equipment

   A. Oxygen setup

   (NOTE: Prepare oxygen setup using instructions on Job Sheet #5 or #6.)

   B. Oxygen mask (Figure 1)

FIGURE 1



Oxygen Mask

II. Procedure

   A. Check physician's order

   B. Wash hands

   C. Assemble equipment and take to patient's unit

JOB SHEET #9

D. Identify patient and explain procedure

E. Attach tubing from oxygen mask to oxygen outlet

F. Start oxygen flow at a high rate, 14-15 liters per minute

(NOTE: Most patients breathe more deeply and rapidly when mask is first applied. If the oxygen flow is initially too low, the patient may not get enough oxygen.)

G. Adjust oxygen mask

H. Secure straps so mask fits snugly, but not tightly enough to hamper circulation

I. Check for oxygen leaking around edges of the mask; if necessary, place a piece of dampened gauze or cotton in leaking areas

J. Readjust rate of flow to prescribed level

K. Remove mask every two hours to sponge and dry patient's face

L. Check frequently for

1. Position of oxygen mask
2. Skin integrity under straps
3. Rate of flow of oxygen
4. Water level in humidifier
5. Patency of tubing
6. Leaks in connections
7. Quantity of oxygen remaining in cylinders

M. Record and report

1. Time
2. Rate of flow
3. Patient response

N. Clean equipment and replace as necessary

(NOTE: Because there are many types of oxygen masks, it is the responsibility of each health care worker to learn about those used in his or her health care facility.)

JOB SHEET #9

III. Procedure to discontinue use

A. Remove mask

B. Shut off oxygen supply

C. Clean equipment and return to proper place

D. Record time oxygen is discontinued

JOB SHEET #9

IV. Checklist for using an oxygen mask

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________________________		
______________________________		
______________________________		
B. Checked physician's order	☐	☐
Comments: ______________________________		
______________________________		
______________________________		
C. Washed hands	☐	☐
Comments: ______________________________		
______________________________		
______________________________		
D. Assembled equipment and took to patient's unit	☐	☐
Comments: ______________________________		
______________________________		
______________________________		
E. Identified patient and explained procedure	☐	☐
Comments: ______________________________		
______________________________		
______________________________		

JOB SHEET #9

		Performed well	Needs improvement
F.	Attached tubing from oxygen mask to oxygen outlet	☐	☐
	Comments: ____________________		
G.	Started oxygen flow at a high rate, 14-15 liters per minute	☐	☐
	Comments: ____________________		
H.	Adjusted oxygen mask	☐	☐
	Comments: ____________________		
I.	Secured straps so mask fit snugly, but not tightly enough to hamper circulation	☐	☐
	Comments: ____________________		
J.	Checked for oxygen leaking around edges of mask; if necessary, placed a piece of dampened gauze or cotton in leaking areas	☐	☐
	Comments: ____________________		

JOB SHEET #9

Performed well | Needs improvement

K. Readjusted rate of flow to prescribed level ☐ ☐

Comments: ______________________________

L. Removed mask every two hours to sponge and dry patient's face ☐ ☐

Comments: ______________________________

M. Checked frequently for position of oxygen mask, skin integrity under straps, rate of flow of oxygen, water level in humidifier, patency of tubing, leaks in connections, and quantity of oxygen remaining in cylinders ☐ ☐

Comments: ______________________________

N. Recorded and reported time, rate of flow, and patient response ☐ ☐

Comments: ______________________________

O. Cleaned equipment and replaced as necessary ☐ ☐

Comments: ______________________________

JOB SHEET #9

		Performed well	Needs improvement
P.	To discontinue use, removed mask; shut off oxygen supply	☐	☐

Comments: ____________________

____

____

Q.	Cleaned equipment and returned to proper place	☐	☐

Comments: ____________________

____

____

R.	Recorded time oxygen was discontinued	☐	☐

Comments: ____________________

____

____

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

JOB SHEET #10--PREPARE AND USE AN OXYGEN TENT

I. Equipment

   A. Canopy

   B. Control cabinet

II. Procedure

   A. Check physician's order

   B. Wash hands

   C. Obtain equipment

   D. Identify patient and explain procedure

   E. Provide privacy

   F. Check to make sure mattress is covered with plastic

   G. Assemble the oxygen tent

      1. Move the tent to the head of the bed with the regulating dials facing away from the bed

      2. Connect the oxygen supply to the cabinet

      3. Plug the cord from the cabinet into an electrical outlet

      4. Turn the motor on and set the control knobs on the control panel

      5. Set temperature at 70° or as prescribed

      6. Adjust oxygen flow at 15 liters per minute for the first 15-30 minutes

   H. Arrange the canopy over the patient and upper part of the bed

   I. Tuck the canopy under the mattress at the top and sides

   J. Use a sheet to secure the edge of the canopy across the bed and patient's body

   K. Place manual call bell inside the tent

   L. Close all openings in the canopy

   M. Analyze oxygen concentration in 15-30 minutes

   (NOTE: Use oxygen analyzer according to manufacturer's instructions.)

JOB SHEET #10

N. Adjust the rate of oxygen flow to maintain the desired concentration, usually 10-12 liters per minute

O. Check patient and equipment frequently during treatment

   1. Reassure patient

   2. Assess patient's condition

   3. Maintain desired temperature

      (NOTE: Provide covering as needed for comfort.)

   4. Maintain oxygen concentration

      (NOTE: The minimum flow required to wash out and dilute exhaled carbon dioxide is 10 liters per minute.)

   5. Monitor functioning of equipment

P. Maintain therapy

   1. Open tent only as required

   2. Make temperature and oxygen adjustments while the compressor unit is running

   3. Check oxygen supply as needed

   4. Analyze oxygen concentration every four hours and after tent has been opened for any period of time

Q. Record

   1. Time

   2. Method of administration

   3. Level of oxygen flow

   4. Response of patient

JOB SHEET #10

III. Checklist for preparing and using an oxygen tent

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________________________		
B. Checked physician's order	☐	☐
Comments: ______________________________		
C. Washed hands	☐	☐
Comments: ______________________________		
D. Identified patient and explained procedure	☐	☐
Comments: ______________________________		
E. Provided privacy	☐	☐
Comments: ______________________________		
F. Checked to make sure mattress was covered with plastic	☐	☐
Comments: ______________________________		

JOB SHEET #10

		Performed well	Needs improvement
G.	To assemble oxygen tent, moved tent to head of bed with regulating dials faced away from bed	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
H.	Connected oxygen supply to cabinet	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
I.	Plugged cord from cabinet into an electric outlet	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
J.	Turned motor on and set control knobs on control panel	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
K.	Set temperature at 70° or as prescribed	☐	☐

Comments: ______________________________

____

____

JOB SHEET #10

		Performed well	Needs improvement
L.	Adjusted oxygen flow at 15 liters per minute for first 15-30 minutes	☐	☐
	Comments: ______________________________		
M.	Arranged canopy over patient and upper part of bed	☐	☐
	Comments: ______________________________		
N.	Tucked canopy under mattress at top and sides	☐	☐
	Comments: ______________________________		
O.	Used a sheet to secure edge of canopy across bed and patient's body	☐	☐
	Comments: ______________________________		
P.	Placed manual call bell inside tent	☐	☐
	Comments: ______________________________		

JOB SHEET #10

	Performed well	Needs improvement
Q. Closed all openings in canopy	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
R. Analyzed oxygen concentration in 15-30 minutes	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
S. Adjusted rate of oxygen flow to maintain desired concentration, usually 10-12 liters per minute	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
T. Frequently during treatment, reassured patient; assessed patient's condition	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
U. Also maintained desired temperature; maintained oxygen concentration, and monitored functioning of equipment	☐	☐

Comments: ______________________________

____

____

JOB SHEET #10

	Performed well	Needs improvement
V. To maintain therapy, opened tent only as required; made temperature and oxygen adjustments while the compressor unit was running	☐	☐

Comments: ____

____

____

	Performed well	Needs improvement
W. Also checked oxygen supply as needed; analyzed oxygen concentration every four hours and after tent had been opened for any period of time	☐	☐

Comments: ____

____

____

	Performed well	Needs improvement
X. Recorded time, method of administration, level of oxygen flow, and response of patient	☐	☐

Comments: ____

____

____

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

JOB SHEET #11--OBTAIN A THROAT CULTURE

(NOTE: The nurse many times will be responsible for obtaining a throat culture to determine the infective bacteria and sensitivity. The specimen will be incubated in the laboratory for specific tests.)

I. Equipment

A. Culture swab(s)

(NOTE: Many facilities have sterilized swabs that have a type of preservative in the swab container, while others use pre-sterilized swabs. The latter must be taken immediately to the lab.)

B. Tongue blade, if needed, to stabilize tongue

C. Requisition and/or label

(NOTE: Make sure if there is a culture and sensitivity to be done that the correct forms are filled out.)

D. Culture media plates

(NOTE: Depending on what type of test is to be done, special media will be prepared and ready in plates or test tubes.)

Example: Blood agar, chocolate agar

II. Procedure

A. Wash hands

B. Assemble equipment

C. Fill out label or requisition that will accompany specimen container

D. Explain procedure to patient to assure full cooperation

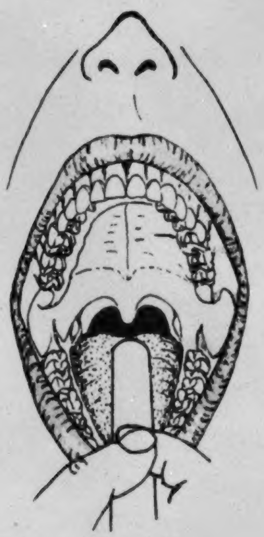
E. Instruct patient to open mouth wide with tongue extending from mouth

JOB SHEET #11

F. Observe the throat to determine areas that will produce the best specimen (Figure 1)

(NOTE: These areas might include either side of the throat and/or the tonsils.)

FIGURE 1



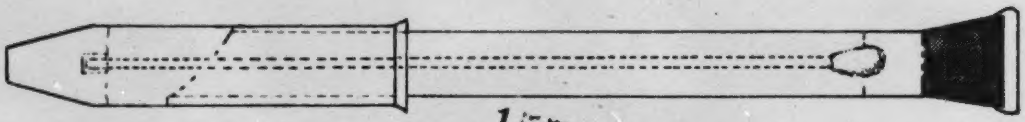
G. Remove the swab carefully from the container, taking care not to contaminate it by touching the cotton end to the outside of the container or your fingers

H. Gently direct the swab to the area of the throat to be used and, using a rolling action, collect the specimen

(NOTE: It is especially necessary to be gentle, as the patient's throat will be very inflamed and sore, and further injury should be avoided. Patients with a very active gag reflex will be stimulated to cough. Be aware of this and move quickly.)

I. Replace the swab in a specially prepared container in the solution provided, following manufacturer's instructions (Figure 2)

FIGURE 2



JOB SHEET #11

J. Attach label or requisition to take to laboratory area for safekeeping

K. Place specimen in media plate or tube as soon as possible if a preservative swab tube has not been used

(NOTE: Follow directions on proper procedure to follow for the type of media you are using.)

L. Plates will be placed in an incubation unit and left for at least 24 hours before being read; temperature will usually depend on what type of media is used

M. Indicate on patient's chart that procedure has been completed

N. Explain to patient that it will take at least 24 hours before specimen can be evaluated

JOB SHEET #11

III. Checklist for obtaining a throat culture

Performed well Needs improvement

A. Gathered necessary equipment ☐ ☐

Comments: ______________________________

____

____

B. Washed hands; assembled equipment ☐ ☐

Comments: ______________________________

____

____

C. Filled out label or requisition that accompanied specimen container ☐ ☐

Comments: ______________________________

____

____

D. Explained procedure to patient to assure full cooperation ☐ ☐

Comments: ______________________________

____

____

E. Instructed patient to open mouth wide with tongue extended from mouth ☐ ☐

Comments: ______________________________

____

____

JOB SHEET #11

		Performed well	Needs improvement
F.	Observed throat to determine areas that would produce best specimen	☐	☐
	Comments: ____________________		
G.	Removed swab carefully from container, taking care not to contaminate it by touching cotton end to outside of container or fingers	☐	☐
	Comments: ____________________		
H.	Gently directed swab to area of throat to be used and, using a rolling action, collected the specimen	☐	☐
	Comments: ____________________		
I.	Replaced swab in a specially prepared container in solution provided and followed manufacturer's instructions	☐	☐
	Comments: ____________________		
J.	Attached label or requisition to take to laboratory for safekeeping	☐	☐
	Comments: ____________________		

JOB SHEET #11

	Performed well	Needs improvement
K. Placed specimen in media plate or tube as soon as possible if a preservative swab tube had not been used	☐	☐

Comments: ____________________

____

____

L. Placed plates in an incubation unit and left for at least 24 hours before being read; temperature depended on type of media used	☐	☐

Comments: ____________________

____

____

M. Indicated on patient's chart that procedure had been completed	☐	☐

Comments: ____________________

____

____

N. Explained to patient that it would take at least 24 hours before specimen could be evaluated	☐	☐

Comments: ____________________

____

____

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

TEST

NAME______________________________________ SCORE____________

1. Match terms associated with the respiratory system to the correct definitions. Write the correct numbers in the blanks.

_____a. Drawing of air into lungs

_____b. Cavity or pouch; baglike part of an organ

_____c. Eight cavities in the skull connected with the nasal cavities

_____d. Masses of lymphoid tissue found in the nasopharynx

_____e. Exchange of oxygen (O_2) and carbon dioxide (CO_2) in the body

_____f. Notches or depressions on the inner surface of the lungs where the arteries, veins, bronchi, and nerves enter

_____g. Muscular passageway (throat) for food and liquids into the esophagus and for air into the lungs

_____h. Alternate inspiration and expiration of air that supplies oxygen to tissue cells and removes the gaseous waste product, carbon dioxide

_____i. Voice box

_____j. Masses of lymphoid tissue found in the oropharynx

_____k. Passageways which connect the middle ear with the pharynx

_____l. Expulsion of air from the lungs

_____m. Hairlike processes projecting from epithelial cells

_____n. To draw in or out by suction

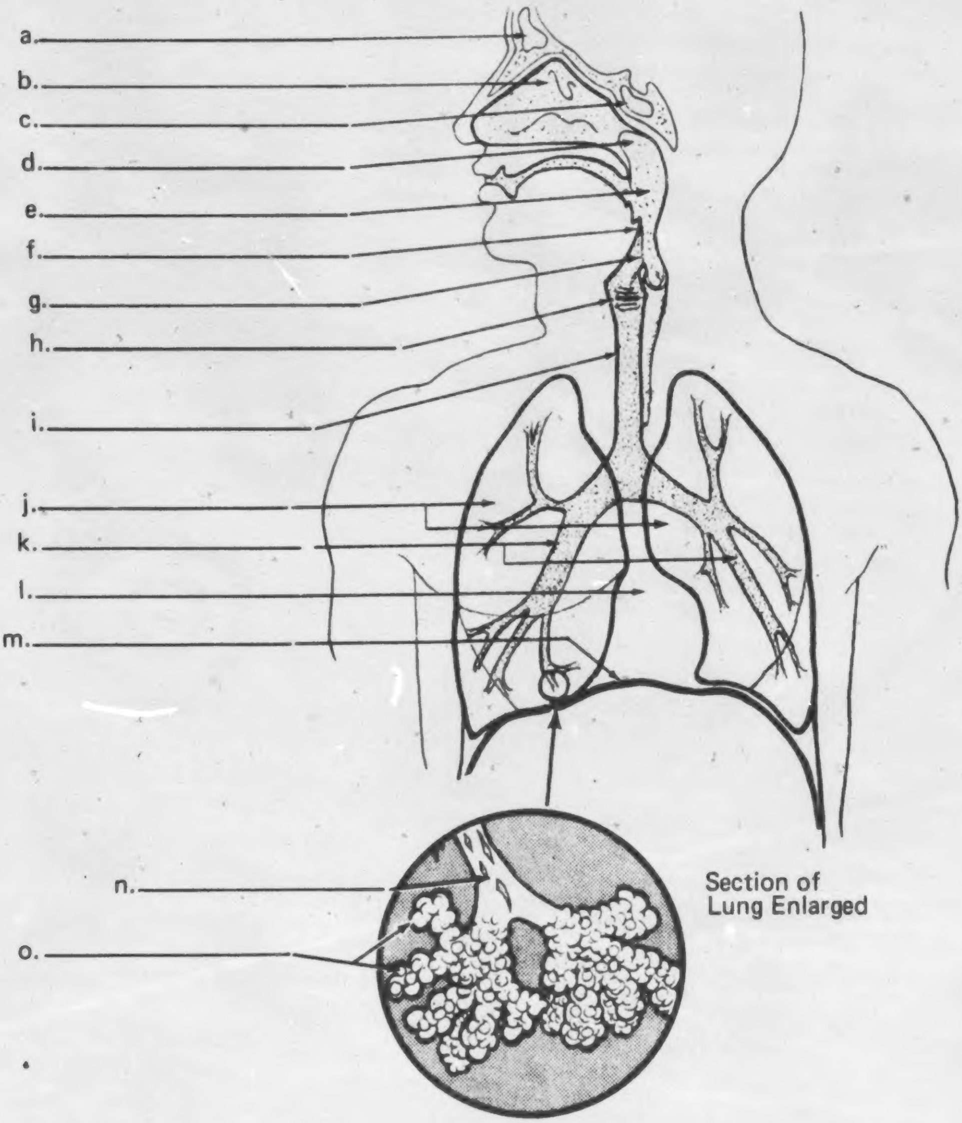
1. Respiration
2. Breathing
3. Inspiration
4. Expiration
5. Sinuses
6. Pharynx
7. Cilia
8. Adenoids
9. Tonsils
10. Eustachian tubes
11. Larynx
12. Sac
13. Hilum
14. Aspiration

2. Identify structures of the respiratory system. Write the correct terms in the blanks.

Trachea
Larynx and vocal folds
Epiglottis
Nasal cavity
Alveoli

Diaphragm
Frontal sinus
Nasopharynx
Terminal bronchiole
Bronchi

Sphenoidal sinus
Oropharynx
Laryngeal pharynx
Mediastinum
Lungs



Section of Lung Enlarged

3. Describe the structures of the nasal cavities.

____

____

____

4. Select from the following list functions of the nasal cavities. Write an "X" in the correct blanks.

_____a. Assistance in voice control

_____b. Aid in keeping lungs expanded

_____c. Warming and moistening of the air before it reaches the lungs

_____d. Secretion of various hormones

_____e. Sense of smell

_____f. Removal of foreign bodies, such as dust particles and bacteria, which are filtered out by the cilia or trapped on the surface of the mucous membrane

5. Match structures of the pharynx to the correct descriptions. Write the correct numbers in the blanks.

_____a. Middle section behind the mouth containing the tonsils and the openings of the eustachian tubes

_____b. Upper portion containing the adenoids

_____c. Lower section with openings to larynx and esophagus

1. Nasopharynx
2. Oropharynx
3. Laryngeal pharynx

6. Distinguish between functions of the pharyngeal and laryngeal structures. Write a "P" for pharyngeal and an "L" for laryngeal in the correct blanks.

_____a. Produce sound (voice)

_____b. Adenoids and tonsils serve as filters for microorganisms and other foreign substances

_____c. Serve as passageways for food, fluids, and air

_____d. Serve as passageway for air only

_____e. Eustachian tubes equalize the pressure in the middle ear

_____f. Epiglottis prevents food from entering larynx

7. Describe structures of the bronchi.

8. Distinguish between functions of the bronchi, bronchial structures, and the trachea. Write a "B" for bronchi and bronchial structures and a "T" for trachea in the correct blanks.

______a. Conduction of air to and from lungs

______b. Exchange of gases (oxygen and carbon dioxide)

______c. Passageway of oxygen to alveoli

______d. Transportation of inhaled foreign particles out of body by cilia

9. Select from the following list characteristics of the lung. Write an "X" in the correct blanks.

______a. Covering is a smooth, double-layered sac, pleura, which provides moisture to prevent friction during movement

______b. Consists of striated muscle

______c. Top of the lung is called the apex; the lower, wider portion that fits over the diaphragm is called the base

______d. Consists of two cone-shaped organs which nearly fill the chest cavity

______e. Regenerates when damaged

______f. Is divided into sections called lobes, the right having three lobes and the left two

______g. Secretes respiratory enzymes

______h. Is comprised of spongy tissue filled with alveoli, nerves, and blood and lymph vessels

10. Describe the mechanisms of breathing.

    a. Inspiration-- ______________________________

    ____

    b. Expiration-- ______________________________

    ____

    c. Control-- ______________________________

    ____

11. Select from the following list factors necessary for normal respiration. Write an "X" in the correct blanks.

    ______a. Adequate diet

    ______b. Open airway

    ______c. Normal cholesterol levels

    ______d. Sufficient hemoglobin and ample volume of blood

    ______e. Adequate oxygen supply

    ______f. Stimulation of posterior pituitary

    ______g. Presence of sodium bicarbonate

    ______h. Nerve and chemical control

    ______i. Appropriate levels of acetylcholine

    ______j. Healthy heart and adequate circulation

    ______k. Sufficient, healthy lung tissue and intact rib cage and diaphragm

    ______l. Presence of cardiac enzymes

12. List factors that affect respiratory rates.

    a. ______________________________

    b. ______________________________

    c. ______________________________

    d. ______________________________

    e. ______________________________

    f. ______________________________

    g. ______________________________

    h. ______________________________

13. Describe criteria to consider when assessing the respiratory system.

a. Objective data--

b. Subjective data--

c. Laboratory data--

14. List common breath sounds.

a.

b.

c.

d.

15. List influences which may predispose respiratory difficulty.

a. ____________________

b. ____________________

c. ____________________

d. ____________________

e. ____________________

f. ____________________

g. ____________________

h. ____________________

i. ____________________

j. ____________________

k. ____________________

l. ____________________

16. List nursing measures that increase respiratory efficiency.

a. ____________________

b. ____________________

c. ____________________

d. ____________________

e. ____________________

f. ____________________

g. ____________________

17. Match terms associated with ventilation to the correct definitions. Write the correct numbers in the blanks.

_____a. Vocal folds and the space between them

_____b. Absorption of, or combination with, water

_____c. Large container partially filled with water; used for respiratory exercise

_____d. Wavelike movement of the cilia, such as those on the epithelium of the respiratory tract

_____e. Abnormally rapid, deep breathing

1. Ciliary action
2. Hyperventilation
3. Blow bottle
4. Hydration
5. Glottis

______ f. Device that breaks up a liquid into small particles or mist which can then be carried down into the aveoli with air

______ g. Removal of bronchial secretions or the contents of a lung abscess by the use of gravity and position

______ h. Mechanical device used to provide a specific amount of air; air and oxygen; or air, oxygen, and medication under increased pressure

______ i. Amount of air breathed in and out by a single breath

______ j. Inspiration and expiration of air from the lungs

______ k. Temporary narrowing of the bronchi due to involuntary contraction of the smooth muscle of the bronchi

______ l. Absence or deficiency of oxygen

______ m. Individual skilled in the use of medications and physical agents for respiratory dysfunctions

______ n. Collapse of a lung or part of a lung

______ o. Program for prevention and treatment of respiratory and circulatory dysfunctions

______ p. Oxygen deficiency

______ q. Collection of fluid in the dependent portion of the lung which is seen in patients who remain in one position for long periods of time

______ r. Volume-measuring device that provides an incentive to deep breathe

6. Tidal volume
7. Ventilation
8. Postural drainage
9. Intermittent positive pressure breathing (IPPB)
10. Nebulizer
11. Anoxia
12. Hypostatic pneumonia
13. Atelectasis
14. Respiratory therapist
15. Respiratory therapy
16. Hypoxia
17. Bronchospasm
18. Incentive spirometer

18. List signs and symptoms of hypoxia.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

g. ______________________________

h. ______________________________

i. ______________________________

j. ______________________________

k. ______________________________

l. ______________________________

m. ______________________________

19. Match terms associated with administration of oxygen to the correct definitions. Write the correct numbers in the blanks. Definitions are continued on the next page.

_____a. Dissolving or liquefying mucus

_____b. Plastic tube with rounded tip for insertion into the nasopharynx or oropharynx for administration of oxygen to adults and older children

_____c. Mechanical device used on an oxygen cylinder with one gauge to show how much oxygen the tank contains and a second gauge to show the rate of flow

_____d. Canopy of lightweight, supple, transparent material which encloses the upper part of a patient's body and bed; used to administer oxygen to adults and older children

_____e. Amount of oxygen supplied during each minute of administration

_____f. Disposable plastic device which has two protruding prongs for insertion into the nostrils; used to administer oxygen to adults and older children

_____g. Container, usually a glass jar, attached to oxygen equipment to increase moisture content of oxygen during administration

_____h. Device for measuring the rate of flow of a gas or liquid in liters per minute

_____i. Oxygen tent with humidification to be used for an infant or child

_____j. Electricity produced by friction

1. Flow rate
2. Regulator
3. Flowmeter
4. Static electricity
5. Retrolental fibroplasia
6. Nasal cannula
7. Nasal catheter
8. Oxygen mask
9. Oxygen tent
10. Humidifier
11. Mucolytic
12. Croupette

_____k. Plastic device of varying sizes and shapes made to fit over the nose and mouth for the administration of oxygen to adults and older children

_____l. Retinal damage in premature infants following administration of a high concentration of oxygen (40 percent)

20. State facts to remember when administering oxygen.

a. ____________________

____

b. ____________________

____

c. ____________________

____

d. ____________________

____

e. ____________________

____

21. Name sources of oxygen supply.

a. ____________________

b. ____________________

22. Describe safety factors to observe when using oxygen.

____

____

____

____

____

____

____

____

23. Describe methods of administering oxygen to infants and small children.

a. Incubator or Isolette--

b. Bubble or hood--

c. Mist or croupette--

24. Assess breath sounds.

25. Demonstrate the ability to:

    a. Assist with breathing exercises.
    b. Suction oronasal tract.
    c. Assist with postural drainage.
    d. Collect a sputum specimen.
    e. Use an oxygen cylinder.
    f. Use piped-in oxygen unit.
    g. Use a nasal cannula.
    h. Insert a nasal catheter.
    i. Use an oxygen mask.
    j. Prepare and use an oxygen tent.
    k. Obtain a throat culture.

    (NOTE: If activities 24-25 have not been finished before the test, ask your instructor when they should be completed.)

RESPIRATORY SYSTEM AND VENTILATION
UNIT XI

ANSWERS TO TEST

1. a. 3
    b. 12
    c. 5
    d. 8
    e. 1
    f. 13
    g. 6
    h. 2
    i. 11
    j. 9
    k. 10
    l. 4
    m. 7
    n. 14
2. a. Frontal sinus
    b. Nasal cavity
    c. Sphenoidal sinus
    d. Nasopharynx
    e. Oropharynx
    f. Epiglottis
    g. Laryngeal pharynx
    h. Larynx and vocal folds
    i. Trachea
    j. Lungs
    k. Bronchi
    l. Mediastinum
    m. Diaphragm
    n. Terminal bronchiole
    o. Alveoli
3. Description should include:
    a. Two spaces (nasal cavities) separated by a partition (nasal septum)
    b. Three small bones, the turbinates or conchae, project into each nasal cavity
    c. Nasal cavities are lined with a ciliated mucous membrane
4. c, e, f
5. a. 2
    b. 1
    c. 3

6. a. L d. L
   b. P e. P
   c. P f. L

7. Description should include:
   a. As the trachea enters the chest cavity, it divides into two smaller tubes, the right and left bronchus
   b. As the bronchi enter the lungs at the hilum, they divide into smaller branches, forming the bronchial tree
   c. The smallest branches, called bronchioles, have walls composed of smooth muscle and a lining of mucous membrane
   d. At the end of each bronchiole there is a cluster of air sacs, resembling a bunch of grapes, known as the alveoli
   e. Each air sac, alveolus, is lined with epithelium, one cell-layer thick and surrounded by capillary network

8. a. T
   b. B
   c. B
   d. T

9. a, c, d, f, h

10. Descriptions should include:
    a. Inspiration--The diaphragm and the intercostal muscles contract, creating a vacuum; air rushes in to inflate the lungs
    b. Expiration--Diaphragm and intercostal muscles relax; lungs are compressed and air flows out
    c. Control--Regulated by the respiratory center of the brain, located in the medulla, immediately above the spinal cord

11. b, d, e, h, j, k

12. a. Age
    b. Sex
    c. Exercise
    d. Body position

e. Temperature

f. Drugs

g. Physical condition

h. Emotions

13. Descriptions should include:

   a. Objective data

      1) Rate or number of respirations per minute

      2) Rhythm or the regularity of rate and the depth of respirations

      3) Character or the effort required and the muscles involved

      4) Breath sounds, including those heard with the unaided ear and those heard with a stethoscope

      5) Mental status and level of consciousness

   b. Subjective data

      1) History of previous or current respiratory, cardiac, or blood disorders

      2) Description of respiratory impairment

      3) Impression of limitations due to respiratory impairment

   c. Laboratory data

      1) X-rays of chest

      2) Pulmonary function tests which measure the lung capacity and mechanics of breathing

      3) Blood analyses such as hemoglobin, carbon dioxide-combining power, and blood gases

      4) Sputum specimens and throat cultures

14. a. Rales

   b. Ronchi and wheezing

   c. Popping

   d. Crackles

15. a. Smoking
    b. Hazardous occupations
    c. Respiratory or cardiac impairment
    d. Air pollution
    e. Anesthesia, either inhaled or systemic
    f. Trauma
    g. Obesity
    h. Narcotics or other drugs
    i. Musculoskeletal defects or poor posutre
    j. Immobility
    k. Neurological defects
    l. Aspiration

16. a. Changing patient's position frequently
    b. Assisting patient with deep-breathing exercises
    c. Encouraging the patient to cough
    d. Suctioning the respiratory tract
    e. Postural drainage
    f. Early ambulation and/or exercise following illness, injury, or surgery
    g. Mechanically-assisted respiratory therapy

17. a. 5
    b. 4
    c. 3
    d. 1
    e. 2
    f. 10
    g. 8
    h. 9
    i. 6
    j. 7
    k. 17
    l. 11
    m. 14
    n. 13
    o. 15
    p. 16
    q. 12
    r. 18

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18. a. Restlessness, irritability, or anxiety
    b. Yawning
    c. Headache
    d. Increased pulse rate
    e. Irregular respirations
    f. Decreased coordination or awareness
    g. Dizziness
    h. Cyanosis of lips and nails
    i. Dyspnea
    j. Delirium
    k. Muscle spasm or twitching
    l. Dilated pupils
    m. Increased respiratory sounds

19. a. 11
    b. 7
    c. 2
    d. 9
    e. 1
    f. 6
    g. 10
    h. 3
    i. 12
    j. 4
    k. 8
    l. 5

20. a. Oxygen supports combustion so there is always danger of fire when it is used
    b. Human body is unable to store oxygen so there must be an adequate supply continually available
    c. Oxygen must be humidified by water, saline, or a medicated solution when giving it therapeutically
    d. The rate of flow is prescribed by the physician and is determined by the condition of the patient and the method of administration
    e. All patients and their families should be instructed if oxygen is being used and necessary safety precautions should be stressed

21. a. Cylinders or tanks of oxygen that may be moved from place to place
    b. Piped-in unit with wall mountings

22. Description should include:

    a. Oxygen is potentially dangerous and must be handled with care

    b. Open flames and sparks in the oxygen area should be avoided

    c. Oil and grease should not be used on oxygen cylinders, valves, regulators, or other fittings

    d. All-cotton fabrics are preferable in the area where oxygen is being administered

    e. Mattresses and bed clothing may become saturated with oxygen, causing them to be highly flammable

    f. Use of any electrical devices should be avoided or discontinued

    g. No Smoking and Oxygen in Use signs must be posted prominently on the door and at the patient's bedside

    h. Regulator on the oxygen administration equipment should be adjusted only by authorized persons

    i. Fluid level in humidifier should be maintained to ensure adequate moisture to prevent irritation of the mucous membrane

    j. Prescribed concentrations of oxygen must be maintained; higher concentrations may cause body injury such as retrolental fibroplasia or damage to lungs or brain

    k. Transfer and store oxygen cylinder very carefully

23. Description should include:

    a. Incubator or Isolette

        1) Used for premature and small neonates

        2) Provides closed system with controlled temperature, humidity, and oxygen

    b. Bubble or hood

        1) Used for newborn and smaller infants who require treatment in addition to controlled temperature, humidity, and oxygen

        2) Provides closed system apparatus which covers only the head or the head and shoulders

        3) May be used in an incubator or in a crib with a warming unit

        4) Limits movements of the child; cannot be used for an older infant who would move about

c. Mist or croupette

  1) Used for larger infants and small children

  2) Provides humidified, cooled oxygen in a closed system

  3) Encloses child and crib; allows for movement of child within a controlled atmosphere

24. Evaluated to the satisfaction of the instructor

25. Performance skills evaluated to the satisfaction of the instructor

URINARY SYSTEM AND FLUID BALANCE
UNIT XII

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of the urinary system in assessing the patient's fluid balance. The student should also be able to collect various types of urine specimens and calculate intake and measure output. This knowledge will be evidenced by completion of assignment sheets, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the urinary system to the correct definitions.
2. Describe the excretory systems and their waste products.
3. Label structures of the urinary system including blood vessel supply.
4. Describe the location and structure of the kidneys.
5. Select from a list main functions of the kidneys.
6. Match principal parts of the kidney and nephron to the correct descriptions.
7. Distinguish between structure and functions of the ureter and the bladder.
8. Describe the structure and functions of the male and female urethra.
9. List terms that mean expelling urine.
10. Distinguish between normal and abnormal components of urine.
11. Describe characteristics of normal urine.
12. Select from a list functions of water in the body.
13. List ways the body normally excretes water from its system.
14. List ways in which the body loses water abnormally.
15. Match terms associated with fluid balance to the correct definitions.
16. List ways that kidneys monitor fluid balance.
17. Distinguish between symptoms of water loss and water retention.
18. Describe observations to be made when assessing the urinary system and fluid balance.

19. Describe normal daily requirements of water.

20. List characteristics of urination to observe.

21. Select from a list points to remember in keeping an accurate intake and output chart.

22. List fluids which must be measured for intake.

23. Select from a list fluids which must be measured for output.

24. Match terms associated with collection of specimens to the correct definitions.

25. State guidelines for collecting specimens.

26. Describe types of urine specimens and their collection.

27. Match methods of collecting urine to their purposes.

28. Assess the urinary system and fluid balance.

29. Calculate intake.

30. Fill out and report on requisitions for urinalysis.

31. Demonstrate the ability to:

    a. Assist in use of urinal.

    b. Collect a urine specimen.

    c. Obtain a clean catch/midstream specimen.

    d. Collect a 24-hour/cumulative/complete specimen.

URINARY SYSTEM AND FLUID BALANCE
UNIT XII

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information sheet and make transparencies.

   C. Discuss unit and specific objectives.

   D. Discuss information sheet.

   E. Use animal organs or model to show anatomy.

   F. Visit hospital laboratory to observe various types of urine examinations being completed.

   G. Compare requisitions used in your hospital to those used in Assignment Sheet #3.

   H. Provide students with assignment sheets.

   I. Discuss Assignment Sheet #1, and roleplay methods of obtaining patient information.

   J. Obtain all utensils and intake and output slips from your hospital to complete Assignment Sheet #3.

   K. Provide students with job sheets.

   L. Demonstrate skills outlined in job sheets.

   M. Give test.

II. Unit materials:

   A. Objective sheet

   B. Information sheet

   C. Transparency masters

      1. TM 1--The Urinary System with Blood Vessels

      2. TM 2--Vertical Section Through a Kidney

      3. TM 3--A Simplified Nephron

D. Assignment sheets

  1. Assignment Sheet #1--Assess the Urinary System and Fluid Balance

  2. Assignment Sheet #2--Calculate Intake

  3. Assignment Sheet #3--Fill Out and Report on Requisitions for Urinalysis

E. Job sheets

  1. Job Sheet #1--Assist in Use of Urinal

  2. Job Sheet #2--Collect a Urine Specimen

  3. Job Sheet #3--Obtain a Clean Catch/Midstream Specimen

  4. Job Sheet #4--Collect a 24-Hour/Cumulative/Complete Specimen

F. Test

G. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study.* Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

B. Sloan, Jamee. *Health Service Careers.* Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1979.

C. *Monitoring Fluid and Electrolytes Precisely.* Nursing Skillbook Series. Horsham, Pennsylvania: Intermed Communications, Inc., 1979.

D. Brunner, Lillian; and Suddarth, Doris. *Textbook of Medical-Surgical Nursing.* Philadephia: J. B. Lippincott Company, 1980.

IV. Films--*Urinary System.* Available from Encyclopedia Britannica, 425 North Michigan, Chicago, Illinois 60611.

V. Filmstrips:

(NOTE: The following filmstrips are available from Trainex Corporation, Box 116, Garden Grove, California 92642.)

A. *Anatomy of the Kidneys, Ureters, and Bladder.*

B. *Urinary Care.*

C. *Assisting Your Patients with Urine Elimination.*

D. *Collecting Urine Specimens.*

URINARY SYSTEM AND FLUID BALANCE
UNIT XII

INFORMATION SHEET

I. Terms associated with the urinary system

A. Nephrology--Study of the kidney

(NOTE: *Nephro-* means kidney.)

B. Excretion--Removing useless substances (waste products of cell metabolism) from the blood and lymph

C. Secretion--Process of giving off a specific product as a result of the activity of a gland

D. Elimination--Discharge of indigestible materials and waste products of metabolism from the body

E. Hepatic--Pertaining to the liver

F. Adrenal--Near the kidney

G. Renal--Pertaining to the kidney

H. Ureter--Tube which carries urine from the kidney to the bladder

I. Urethra--Tube for carrying urine from the bladder to the outside of the body

J. Urinary meatus--External opening of the urethra

K. Vascular--Pertaining to or composed of blood vessels

L. Hilum--Depression or recess at exit or entrance of a duct, nerve, or vessel into a gland

M. Nephron--Basic functional unit of the kidneys

N. Urology--Study of the urinary system

O. Renal calculus--Kidney stone

P. Distention--State of being stretched out or overfilled

(NOTE: It is important to know when the bladder is distended from the retention of urine and when the abdomen is distended due to flatulence or some other condition.)

INFORMATION SHEET

Q. Urinal--Receptacle used for urination

(NOTE: There are different types of urinals available. The same principles apply to the use of the urinal as to the bedpan. Place it comfortably and securely so that it does not tip over and the patient can use it without difficulty. Cover with protective cover when carrying it from the patient to the proper receptacle.)

R. Specific gravity--Weight of a substance compared with an equal volume of water

S. Urinary casts--Fibrous material thrown off in various pathological conditions

T. Urea--Chief nitrogenous component of urine

(NOTE: In normal conditions urea represents 80-90 percent of total urinary nitrogen.)

II. Excretory systems and their waste products

A. Skin or integumentary system--Perspiration composed of water, salts, and small quantities of nitrogenous wastes

B. Respiratory system--Vapor composed of water, carbon dioxide, and other gases

C. Digestive system--Feces and fecal material composed of water, bile, some salts, undigested foods, mucus, and bacteria

D. Urinary system--Urine composed of water, salts, and nitrogenous waste products

III. Structures of the urinary system including blood vessel supply (Transparency 1)

(NOTE: Blood from the renal arteries is filtered as it passes through the glomeruli. After absorbing water and other useful products from the convoluted tubules, it empties into the renal veins and passes to the inferior vena cava.)

A. Inferior vena cava

B. Abdominal aorta

C. Adrenal gland (2)

D. Kidney (2)

E. Renal artery (2)

F. Renal vein (2)

INFORMATION SHEET

G. Ureter (2)

H. Urinary bladder

I. Prostate gland

(NOTE: This gland is found only in the male.)

J. Urethra

IV. Location and structure of the kidneys

A. Location

1. Kidneys lie against the muscles of the back under the dome of the diaphragm, protected somewhat by the ribs and their cartilages, and behind the peritoneum

2. Blood vessels and nerves enter the kidney at the hilum

3. Ureter leaves the kidney at the hilum

B. Structure

1. Bean-shaped organs that are reddish-brown

2. Kidneys are embedded in fatty tissue surrounded by a fibrous tissue called renal fascia

V. Main functions of the kidneys

A. Excretion of waste products

B. Assistance in maintaining the water balance of the body

C. Assistance in regulating the acid-base balance of the body

VI. Principal parts of the kidney and nephron (Transparencies 2 and 3)

A. Cortex--Smooth, solid portion of the kidney where the greater part of the nephron is located

B. Medulla--Inner portion of the kidney where the nephron tubes come together in the collecting tubules

(NOTE: The medulla consists of 12 pyramids composed of tiny collecting tubules which give the medulla a striped appearance.)

C. Renal basin or pelvis--Area where the upper ureter expands to form a basin which receives urine from the collecting tubules

D. Glomerulus--Cluster of capillaries that filters blood as it comes from the renal arteries

INFORMATION SHEET

E. Bowman's capsule--Funnel-shaped structure partially enclosing the glomerulus that receives waste, water, glucose, and salts from the thin capillaries

F. Convoluted tubule--Long, twisted tube that carries most of the water and salts and all glucose to be reabsorbed by bloodstream

G. Collecting tubule--Collects the remaining mixture of waste products and water (urine) that has passed through the convoluted tubule

H. Calyx--Bell-shaped cup in the renal pelvis

VII. Structure and functions of the ureter and the bladder

A. Ureter

1. Consists of narrow tubes approximately 1/8" (four-five mm) in diameter and 10-12" (25-30 cm) in length, is attached to the kidney at the renal pelvis and empties into the urinary bladder

2. Moves urine from kidneys to bladder by rhythmic contractions of the muscle wall, similar to peristalsis in the digestive system

(NOTE: When disease or congenital abnormalities destroy the ability of the ureteral wall to contract, urine collects in the pelvis of the kidney. This promotes stagnation of urine that may result in infection or renal calculi.)

B. Bladder

(NOTE: The bladder, when empty, lies below the peritoneum and behind the pubic joint; when full, it may extend upward into the abdominal cavity.)

1. Is composed of many layers, including an inner mucous membrane lining, muscle layers, and connective tissue, and is partially covered with the peritoneum

2. Is thick and folded when empty, but begins to stretch out as it fills and the wall becomes thinner

3. Is capable of holding a liter or more of urine in the adult

(NOTE: When the bladder fills from 200-400 cc, special nerve receptors in the wall are stimulated, which causes a desire to urinate.)

4. Has three openings in wall

(NOTE: The contracted sphincter holds back urine in the bladder until it is released.)

5. Receives and holds urine

INFORMATION SHEET

VIII. Structure and functions of the male and female urethra

(NOTE: The urethra carries urine to the outside of the body.)

A. Male

1. Is part of both the reproductive and urinary systems
2. Is approximately eight inches or 20 cm long in the adult
3. Passes through the prostate gland, where two ducts from the reproductive glands join it, and then through the penis to the outside

B. Female

1. Is a thin-walled tube approximately one to one and one-half inches or four cm long
2. Is embedded in the anterior muscle wall of the vagina

(NOTE: In both male and female, the meatus is controlled by a voluntary sphincter.)

IX. Terms that mean expelling urine

A. Voiding

B. Urination

C. Micturition

X. Normal and abnormal components of urine

A. Normal components

1. Water (95 percent)
2. Protein waste products (urea, uric acid, creatinine)

   (NOTE: When kidney function is impaired, waste products may accumulate in the blood. This is called uremia.)
3. Mineral salts (sodium chloride, sulfates, and phosphate)
4. Yellow pigment from certain bile compounds
5. Toxins
6. Hormones

B. Abnormal components

1. Glucose (glycosuria)

INFORMATION SHEET

2. Albumin (albuminuria)
3. Blood (hematuria)
4. Pus cells (pyuria)
5. Acetone (acetonuria)
6. Casts

XI. Characteristics of normal urine

A. Total volume in 24 hours--Approximately 1,500 cc

B. Color--Straw

C. Appearance--Clear

D. Odor--Mild, aromatic

(NOTE: After standing, it begins to smell of ammonia.)

E. Reaction (pH)--6.0 (slightly acid)

F. Specific gravity--1.015-1.025

(NOTE: This is a little heavier than distilled water.)

XII. Functions of water in the body

(NOTE: Water is obtained in solid foods, water, soup, and beverages; it is also formed by metabolism of foods.)

A. Assists in the regulation of body temperature

B. Removes waste products through intestines, kidneys, skin, and lungs

C. Is an essential constituent of all tissues and fluids

D. Transports nutrients from the digestive tract to the bloodstream and from one cell to another

E. Lubricates joints and moistens viscera for easier movement

F. Aids digestion by softening, diluting, and liquefying foods

XIII. Ways the body normally excretes water from its system

A. Through the kidneys in urine

B. Through the gastrointestinal tract in feces

C. Through the skin in perspiration

INFORMATION SHEET

D. Through the lungs as expired vapor

XIV. Ways in which the body loses water abnormally

A. Vomiting

B. Diarrhea

C. Hemorrhage

D. Excessive perspiration

E. Extensive burns

F. Uncontrolled diabetes mellitus

G. Fever

H. Open or draining wounds

XV. Terms associated with fluid balance

A. Electrolyte--Solution which conducts electricity

(NOTE: Acids, bases, and salts are common electrolytes.)

B. Interstitial fluid--Substance contained in the spaces between cells

(NOTE: This fluid accounts for 15 percent of total body weight.)

C. Intracellular--Within the cell

D. Extracellular--Outside the cell

(NOTE: Intracellular and extracellular compartments enclose the body fluid. The intracellular contains fluid that makes up approximately 40 percent of total body weight.)

E. Pituitary gland--Small, gray, rounded body attached to the base of the brain that secretes hormones which regulate many body processes

(NOTE: The antidiuretic hormone (ADH) is released by the pituitary gland and causes the kidney tubules to reabsorb more water from the distal tubule and collecting duct. It also makes the urine more concentrated. The anterior pituitary gland growth hormone helps maintain glomerular filtration, renal plasma flow, and tubular function.)

F. Aldosterone--Secretion from the adrenal glands which affects the retention or excretion of sodium, potassium, and water

G. Parathyroid glands--Maintain the level of ionized calcium in the blood and regulate the kidneys' conservation of magnesium

INFORMATION SHEET

H. Dehydration--Loss of water from the body or tissues

I. Edema--Local or generalized condition in which body tissues contain an excessive amount of tissue fluid

J. Intake and output--Accurate record of all liquids taken by a patient and accurate measurement of all urine, vomitus, drainage, or other liquid lost from the body

K. Ascites--Excessive accumulation of fluid in the peritoneal cavity

L. Peritoneal cavity--Space between the two layers of the peritoneum

M. Anuria--Suppression of urinary output

N. Oliguria--Diminished urinary output

O. Diaphoresis--Profuse perspiration

P. Diuretic--Agent or medication that increases urinary output

Q. Polyuria--Excessive secretion and excretion of urine

R. Graduate container--Measuring device marked in cubic centimeters

S. Tissue turgor--Fullness of tissue related to the amount of fluid surrounding the cells

T. Hypodermoclysis--Fluids given into the tissue under the skin; primarily to infants and the elderly

XVI. Ways that kidneys monitor fluid balance

A. Through concentration of specific electrolytes

B. Through osmolality of body fluids

C. Through volume of extracellular fluid

D. Through blood volume

E. Through blood pH

XVII. Symptoms of water loss and water retention

A. Water loss

1. Weakness
2. Thirst
3. Difficulty in speaking

INFORMATION SHEET

4. Dry skin and mucous membranes
5. Edematous, dry tongue
6. Fall in blood pressure and weak, rapid pulse
7. Fever
8. Oliguria and anuria
9. Muscle cramps

B. Water retention

1. Confusion, poor coordination
2. Nausea
3. Muscle cramps
4. Headache
5. Weight gain
6. Intake greater than output
7. Moist skin
8. Edema, particularly in feet, ankles, face, and fingers
9. Convulsions, possible coma
10. Hypertension
11. Bounding pulse

XVIII. Observations to be made when assessing the urinary system and fluid balance (Assignment Sheet #1)

(NOTE: Many times the nurse can assess the patient having fluid balance problems and prevent the occurrence of more serious conditions. In most cases, a physician's order is not needed to monitor the patient's intake and output of fluids.)

A. Read patient's chart to find out diagnosis or condition

1. The condition may indicate some fluid balance problems

   Examples: Nephrolysis; nephrohydrosis; nephritis (*Nephro* means kidney)

2. Other conditions may cause a secondary problem that will cause fluid balance problems

   Examples: Diabetes; cardiovascular conditions

INFORMATION SHEET

B. Look at and interpret urinalysis reports, if available

(NOTE: Look at these reports and learn the difference between normal and abnormal values.)

1. Values such as the blood urea nitrogen (BUN), albumin, pH, specific gravity, glucose, and a microscopic examination can indicate what is happening to the patient
2. Reports will usually have the normal values next to the patient's levels; therefore, abnormal levels should be recognizable

   (NOTE: Learn to read these reports as soon as they come back from the laboratory and write down any values that appear abnormal. Report these to the supervisor and/or physician.)

C. Anticipate kind of fluid balance problem according to what type of condition is present

1. Problem will be a deficit of sodium, potassium, or magnesium and chloride, if the loss is through gastric juices
2. Excessive perspiration may lead to a sodium and water deficit
3. Loss through open wounds may lead to deficits in water, sodium, calcium, and protein

D. Check patient for changes in specific vital signs

1. Elevated fever may result in fluid loss because metabolism is increased
2. Fever increases respiratory rate and results in water vapor loss from the lungs
3. Increased pulse rate may indicate a loss of sodium or magnesium and a decreased pulse rate may indicate an excess of magnesium

E. Observe veins, speech patterns, and skin condition

1. Veins will be less visible than usual when the volume of fluid is low and they will be engorged and very visible if body fluid rises
2. Speech patterns will show changes in fluid loss by becoming slower and sluggish
3. Skin that is pinched up and falls back naturally is well-hydrated and has elasticity, whereas skin that is dehydrated may remain raised when pinched

   (NOTE: In the very thin or elderly person, this might not be as reliable a test as others.)

INFORMATION SHEET

F. Observe overall appearance

1. Dehydration will cause the patient to look drawn, and the eyes will be sunken

2. Edema will cause the patient to look puffy; this is usually seen in the eyelids and cheeks, and sometimes the hands, feet, and ankles

G. Note responses to questions about intake and output of fluids

1. Information concerning how much fluid the patient takes in during the day and what type of fluid is valuable

2. Specific information on how much the patient voids every 24 hours and the amount each time can be important

XIX. Normal daily requirements of water

A. Six-eight glasses of water daily is recommended for an average adult

B. More is required in certain conditions

Examples: Elevated body temperature, during and after excessive loss of fluids, warm weather, infants in proportion to their weight

(NOTE: The average adult should consume a volume of water equivalent to 3/4-ounce per pound of body weight; an infant should have approximately 2 1/4-ounces per pound of body weight.)

XX. Characteristics of urination to observe

A. Amount

B. Frequency, urgency, discomfort, or pain

C. Color and transparency

(NOTE: Urine is usually a light yellow and is relatively clear.)

D. Unusual odor

XXI. Points to remember in keeping an accurate intake and output chart (Assignment Sheet #2)

A. Make sure there is an I and O form at the bedside for each eight-hour shift to record intake and output

(NOTE: Each hospital usually has specific forms where the intake and output records are kept.)

INFORMATION SHEET

B. Check patient's tray before and after serving to determine intake

(NOTE: Make sure you use the measurements specified for the containers used in your facility.)

C. Measure water before emptying pitcher to obtain fresh water to determine the amount which has been taken

D. Measure urinary output each time bedpan or urinal is emptied, using the graduated pitcher

E. Measure and record any other body discharges such as vomitus, diarrhea, those in the suction apparatus, and drainage on dressings

(NOTE: If patient perspires profusely, note this as diaphoresis on the intake and output chart and in the nurse's notes. If unable to measure drainage accurately, estimate amount and note in chart.)

Example: Large amount of dark red drainage noted on upper left quadrant of abdominal dressing

F. Gain cooperation from patient and family in obtaining an accurate amount measured for intake and output

(NOTE: Explain how important it is to have the exact amount; show them the containers, and tell them exactly what substances are to be measured.)

XXII. Fluids which must be measured for intake

A. All liquids, hot and cold

Examples: Water; coffee; tea; milk; juices; carbonated beverages; cream on cereal or in coffee

B. Ice cream, milk shakes, sherbet

C. Gelatin

D. Broth or soup

E. Ice chips

F. Intravenous fluids

(NOTE: These fluids will be charted under a different heading, but are still considered intake.)

INFORMATION SHEET

XXIII. Fluids which must be measured for output

A. Urine

B. Fluid from suction devices

C. Vomitus

D. Estimated amount of hemorrhage, drainage, diarrhea, and/or perspiration

XXIV. Terms associated with collection of specimens

A. Catheter--Tubular instrument of rubber, plastic, metal, or other material, used for draining or injecting fluids through a body passage

B. Culture--Growing of microorganisms in a special substance in a laboratory setting

C. Sensitivity--Laboratory determination of the reaction of cultured organisms to various medications

D. Albuminuria--Presence of albumin in the urine

E. Hematuria--Presence of blood in the urine

F. Glycosuria--Presence of glucose in the urine

G. Dysuria--Painful urination

H. Specimen--Small sample or part of something taken to show the nature of the whole

I. Vulva--External opening of the female reproductive system that surrounds the opening of the vagina

XXV. Guidelines for collecting specimens (Assignment Sheet #3)

(NOTE: Report inability to obtain a specimen or lost or contaminated specimens to the charge nurse.)

A. Follow the procedures for your particular institution

B. Make certain of the time, type, and amount of specimen to be collected

C. Explain procedure to patient and/or family

D. Use proper container; avoid overfilling or contaminating the outside of the container

E. Label specimen correctly with patient's name and room number, time of collection, and type of specimen

F. Complete correct requisitions to be sent with specimen

INFORMATION SHEET

G. Wash hands thoroughly after collecting specimen

(NOTE: Many specimens are highly infective. Observe strict medical asepsis in obtaining specimens.)

H. Send specimen to laboratory promptly or store at proper temperature with necessary preservatives

I. Record the time, type of specimen, characteristics such as the color, appearance, and amount; include any significant patient observation

XXVI. Types of urine specimens and their collection (Job Sheets #1, #2, #3, and #4)

A. Routine specimen

(NOTE: This is usually obtained as soon as possible after admission.)

1. First voided specimen of the day (usually)
2. Soap and water cleansing of the genital area immediately before obtaining the specimen is essential in female patients, due to the presence of numerous bacteria around the urethra
3. Container can be a specimen cup

B. Clean catch/midstream specimen

1. Patient is instructed to cleanse the urethral area thoroughly
2. Small amount is voided into the toilet to rinse the urethra
3. Middle of the stream is voided into container provided
4. Last urine is voided into the toilet

C. Twenty-four hour/cumulative/complete specimen

1. Receptacle for storing urine is labeled and placed in a refrigerator near patient's unit

   (NOTE: If this is not possible, a container may be used that can be iced down with or without a specific perservative. The laboratory will send the container to the floor when the requisition is received.)

2. First or beginning specimen is obtained at a designated time and DISCARDED
3. All other specimens are saved and poured into storage container

INFORMATION SHEET

4. The final voiding is collected and added 24 hours after the initial specimen

5. The entire amount for the 24 hours is collected

D. Diabetic specimen

(NOTE: Specimens are taken at specified times and may be ordered by the attending physician. This test may also be called a fractional urinalysis [UA].)

1. First specimen should be discarded, if possible, and the second specimen used for testing

   (NOTE: This may be a problem with patients who are having difficulty in voiding; the first voided specimen may need to be used

2. Urine specimens are tested at the time they are obtained by the nurse

E. Catheterized specimen

1. Sterile technique should be used throughout procedure

2. Female patients assume a dorsal recumbent position while males may lie in supine position

3. Sterile urine is obtained by passing a small tube through the urinary meatus and urethra to the bladder

4. Specimen is put into a sterile container and sent to the laboratory with appropriate requisition

XXVII. Methods of collecting urine and their purposes

A. Routine specimen--Aids in diagnosis and determining progress of a disease, determines kidney and cardiac function, and determines the type of organism in an infection of the urinary system

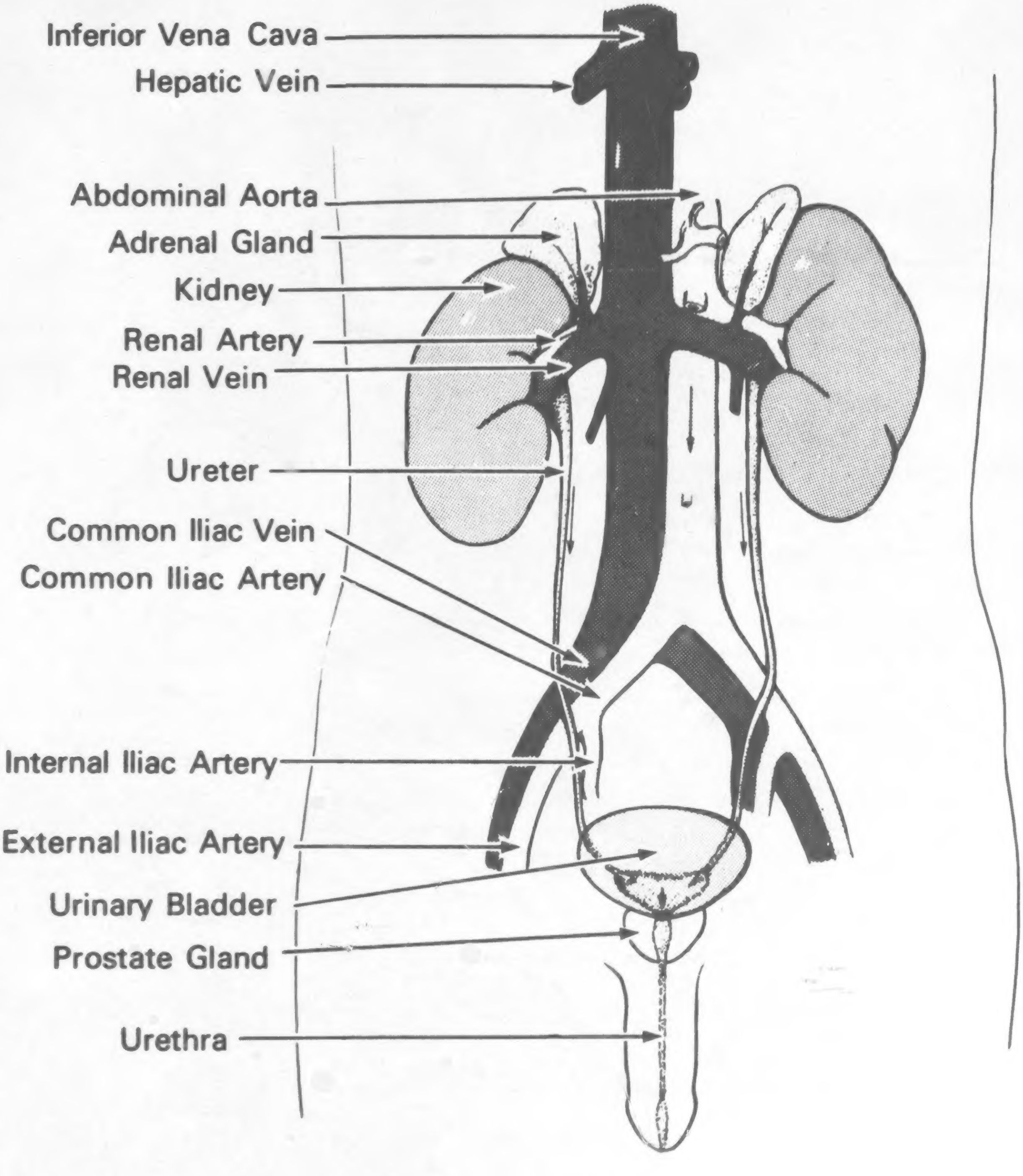
B. Clean catch/midstream specimen--Determines presence of foreign substance or microorganisms

C. Twenty-four hour/cumulative/complete specimen--Determines wastes the kidneys are excreting and the amount of each type

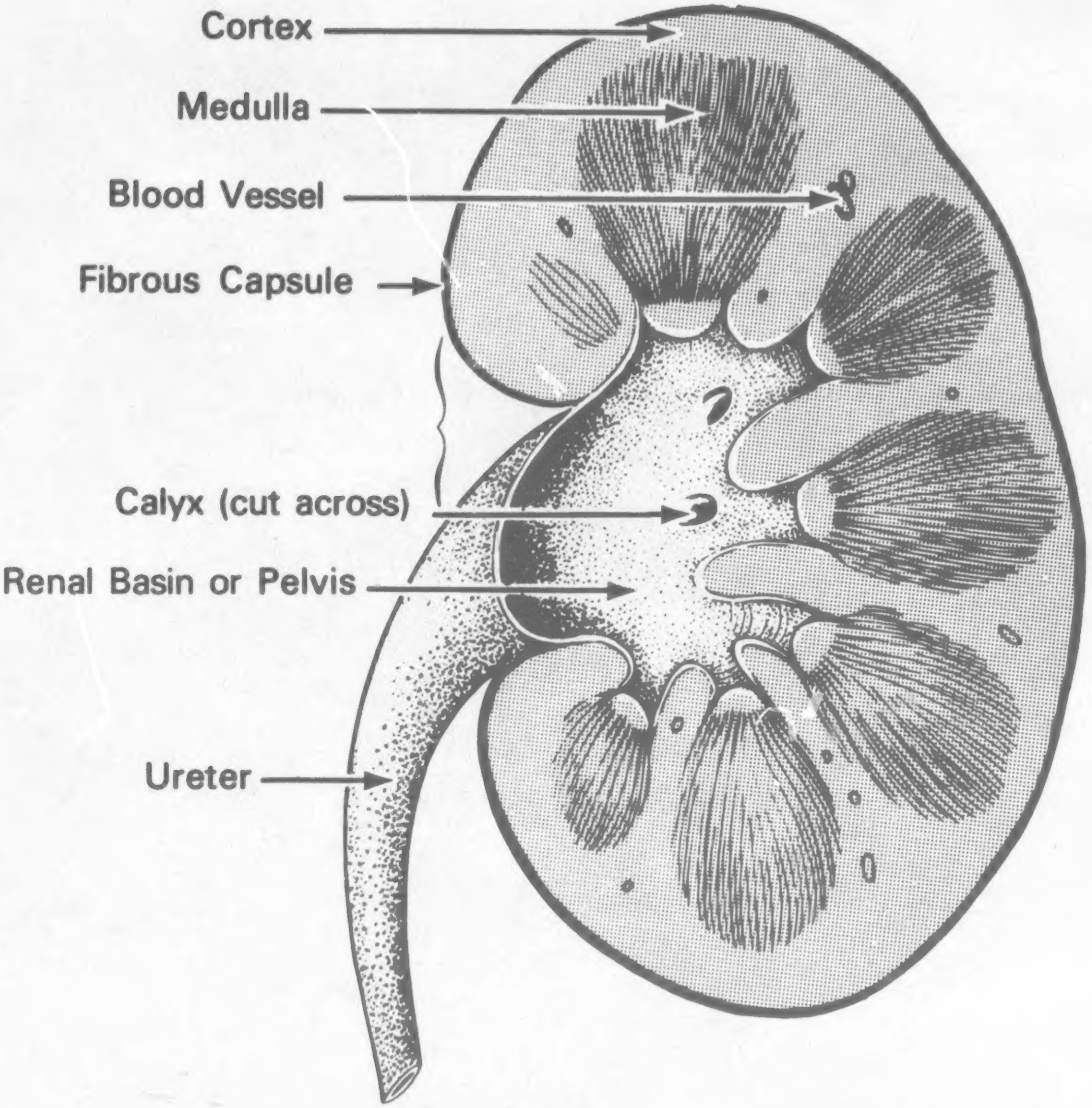
D. Diabetic specimen--May determine how much insulin the patient should receive, helps in determining the status of the condition, and what type of diet the patient should receive

E. Catheterized specimen--Used for culture and sensitivity of disease organisms

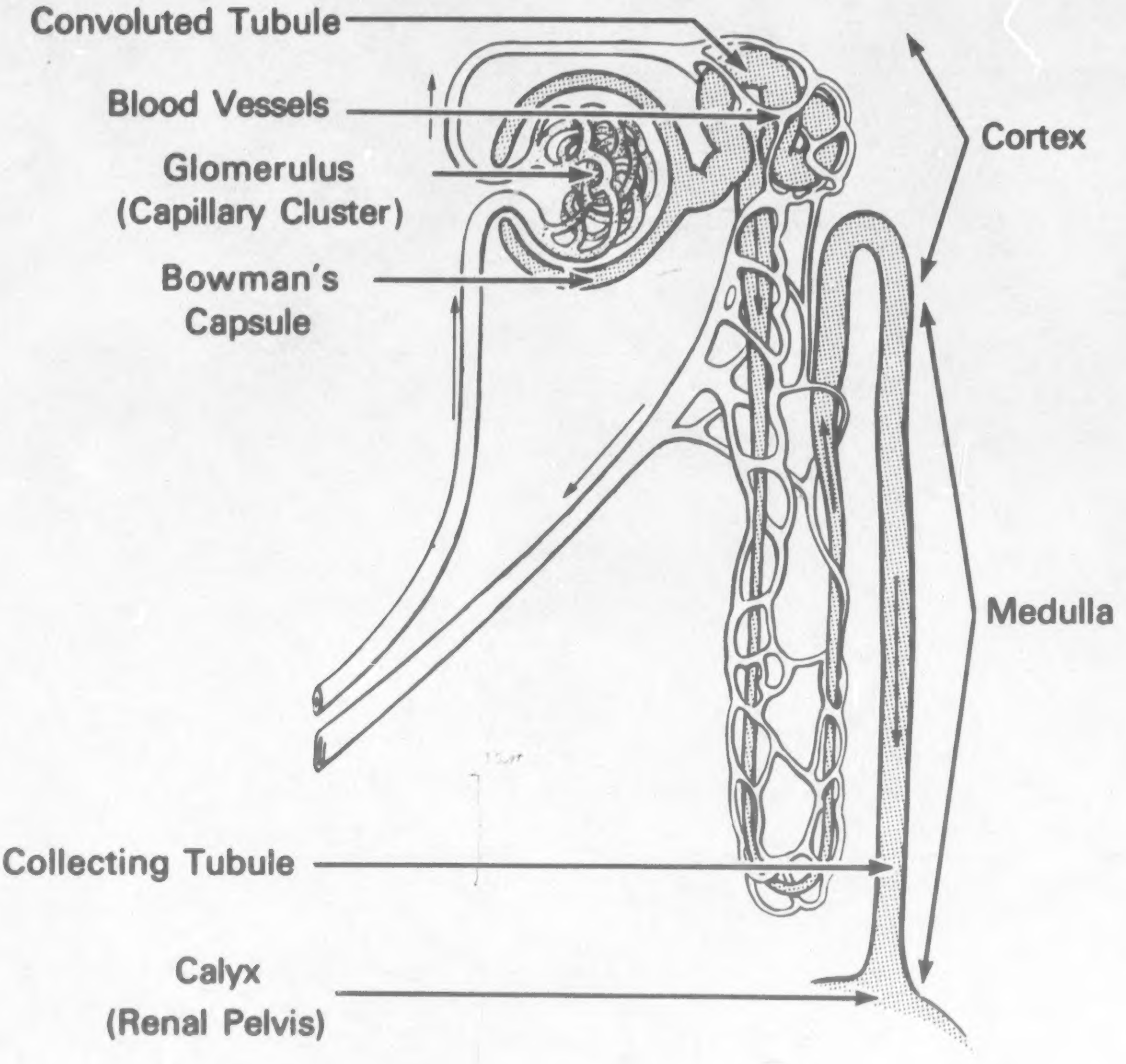
The Urinary System with Blood Vessels


Inferior Vena Cava
Hepatic Vein
Abdominal Aorta
Adrenal Gland
Kidney
Renal Artery
Renal Vein
Ureter
Common Iliac Vein
Common Iliac Artery
Internal Iliac Artery
External Iliac Artery
Urinary Bladder
Prostate Gland
Urethra

Vertical Section Through A Kidney


Cortex
Medulla
Blood Vessel
Fibrous Capsule
Calyx (cut across)
Renal Basin or Pelvis
Ureter

A Simplified Nephron


Convoluted Tubule
Blood Vessels
Glomerulus
(Capillary Cluster)
Bowman's
Capsule
Cortex
Medulla
Collecting Tubule
Calyx
(Renal Pelvis)

URINARY SYSTEM AND FLUID BALANCE
UNIT XII

ASSIGNMENT SHEET #1--ASSESS THE URINARY SYSTEM AND FLUID BALANCE

NAME ________________________________ SCORE __________

Many specific technical tests can be used to assess the urinary system and fluid balance. One of the nurse's responsibilities will be to use certain questioning techniques to help assess the patient's urinary system. There are certain signs and symptoms that are unique to this system and through specific questions the nurse may find problems that may be treated before they become critical. Select a patient, or your instructor may assign one to you. Using the questions and techniques listed below, assess the urinary system. After obtaining the information, discuss in class your findings and compare with other students' assessments.

Date: __________

Patient's name or initials: ______________________________

Admitting diagnosis: ______________________________

Age: __________ Occupation: ____________________

Any previous history of urinary problems? __________ If so, what? __________

____

Family history of renal problems? ______________________________

____

Are there any disorders of voiding? ____________________

Dysuria __________ When? __________ Where is it felt? __________

Hesitancy? __________ Straining? __________ Changes in color? __________

Incontinence? __________ Hematuria? __________

Pain present? __________ Location? __________ Radiation? __________ Duration __________

What brings it on? __________ What relieves it? __________

Has the patient had fever? __________ Chills? __________ Passage of stones? __________

History of sexually transmitted diseases? __________ What type? __________

How long ago? __________

1388-C

ASSIGNMENT SHEET #1

For the female patient:

Number of children?_________What type of deliveries?_______________Were any of the deliveries particularly difficult?________________Any problems in voiding after deliveries?___________What type?____________Any signs of vaginal discharge?_____

History of diabetes?_________Hypertension?______________Allergies?_________

Types of exams done in past:

Catheterization?__________X-rays?___________Other____________________

URINARY SYSTEM AND FLUID BALANCE
UNIT XII

ASSIGNMENT SHEET #2--CALCULATE INTAKE

NAME ______________________________ SCORE __________

(NOTE: Average oral intake for an adult is 2,000 to 3,000 cm^3 (cc) of fluid per day.)

Perform the tasks below using the following materials: cups, bowls, glasses, pitcher, graduate container, water, and ice chips.

(NOTE: Container sizes vary with each institution. The instructor will provide the correct measurements for the containers used. A standard of basic liquid measures is given below.)

U.S. Customary Liquid Measure
With Equivalent Metric Measurements

U.S. Customary		Metric
1/4 teaspoonful	=	1 cc
1 teaspoonful	=	4 cc
1 ounce	=	30 cc
1 cup	=	240 cc
1 pint	=	500 cc
1 quart	=	1,000 cc

1. Fill containers with water

2. Measure water from each container with the graduate container and record below

   Juice glass ________________ cm^3 (cc)

   Water glass ________________ cm^3 (cc)

   Paper cup ________________ cm^3 (cc)

   Soup bowl ________________ cm^3 (cc)

   Pitcher ________________ cm^3 (cc)

3. Fill a juice glass with ice chips, melt the chips, measure, and record below

   Juice glass of ice chips ________________ cm^3 (cc)

   (NOTE: 1 oz. of ice usually equals 15 cc melted liquid. Take into consideration whether ice is chipped or cubed.)

ASSIGNMENT SHEET #2

4. Calculate intake for the meal described below using the measurements indicated in step two.

   (NOTE: Keep a pencil and paper at the patient's bedside to record intake and output. Most institutions will have their own forms to calculate the 24-hour amounts.)

   Soup--1/2 taken

   Milk--2/3 taken

   Juice--1 glass

   Jello--1 serving

   Ice chips--1/2 paper cup

   Coffee--1/3 cup

   Total Intake__________________________ cm^3 (cc)

URINARY SYSTEM AND FLUID BALANCE
UNIT XII

ASSIGNMENT SHEET #3--FILL OUT AND REPORT ON REQUISITIONS FOR URINALYSIS

NAME ______________________ SCORE ____________

As a nurse you should be familiar with requisitions from various departments when specific tests have been ordered. Make sure that you have all the correct information so that the correct test is done for the right patient. When the urinalysis report comes back to the floor, note any abnormalities and report them to the physician or charge nurse. There are four urinalysis requisitions in this assignment sheet. The first two are to be filled out according to the information given to you in the case study above the slips. The second two contain information that needs to be noted and charted. Fill in the blanks, charting the information you find. When finished, hand in to your instructor for evaluation.

ASSIGNMENT SHEET #3

1. Robert J. Radford, a patient in 205A, has been admitted for a medical evaluation. Dr. Welsh has ordered a routine voided urinalysis, to be done today. Patient number 009467.

URINALYSIS

69771 11012-45 FORM 2704 FENTON'S, STILLWATER, OKLA

☒ Routine
☐ Stat
☒ Today
Time 9 A.M. / P.M.

☒ Void
☐ Cath
☐ Clean Catch

Date to be done 3/23/ yr

RN:
Date 3/23/yr
Diagnosis Med. Evaluation

Date Collected
Time Collected
Collected By J Sloan R.N.

Technologist
Time Completed
Date Completed

Lab. No. 009467
Code
Charges

Radford, Robert J.
Room#205A
Dr. Welsh

TIME IN LAB
TIME OUT LAB

☐ Color ☐ Character

Specific Gravity		WBC		Pregnancy Test (Slide)	
pH		RBC		Pregnancy Test (UCG)	
Protein		Epith. Cells		Remarks	
Glucose		Bacteria			
Acetone		Casts /LPF			
Bile					
Occult Blood		Crystals			
Urobilinogen					

URINALYSIS

Used with permission of Fenton Office Supply Company, Stillwater, Oklahoma

ASSIGNMENT SHEET #3

2. Stat urinalysis back from lab. Noted results show a specific gravity of 1.018 and a large amount of occult blood. Dr. Marcy was notified of results. Order received and noted to obtain a cath U.A.

URINALYSIS

69771 11012-45 FORM 2704 FENTON'S, STILLWATER, OKLA

☐ Routine
☒ Stat
☒ Today
Time 7 A.M. / P.M.

☐ Void
☐ Cath.
☒ Clean Catch

Date to be done 6-20-yr.

RN:

Date 6-20-yr

Diagnosis poss. UTI

Date Collected 6-20-yr.

Time Collected 7^{15} AM

Collected By J. Sloan RN

Technologist T Waynes

Time Completed 9^{30} A.M.

Date Completed 6-20-yr

Lab. No. 625-F

Code 4100-10

Charges

076254

Wallace, Jane M.
Room 416
Dr. Marcy

TIME IN LAB 7^{30} AM

TIME OUT LAB 9^{45} AM

☐ Color Reddish ☒ Character

	Specific Gravity	1.018	X	WBC	6	Pregnancy Test (Slide)	
	pH	8.4	X	RBC		Pregnancy Test (UCG)	
X	Protein	Trace	X	Epith. Cells	None	Remarks	Results indicate bacterial
X	Glucose	None	X	Bacteria	Large		infection. Possible B.
X	Acetone	None	X	Casts /LPF	None		proteus. Rec. cath U.A. for C&S.
X	Bile	None					
X	Occult Blood	Large		Crystals			
X	Urobilinogen	None					

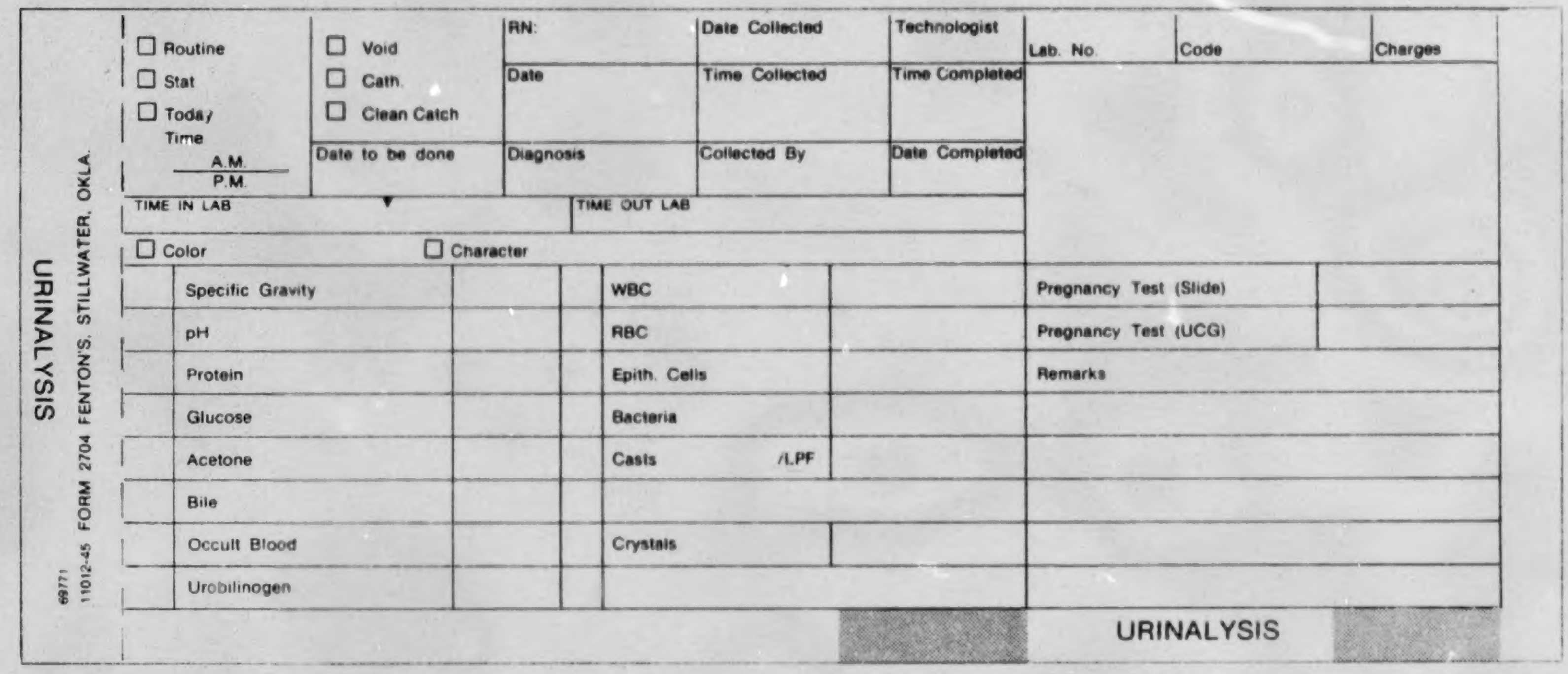
URINALYSIS

Used with permission of Fenton Office Supply Company, Stillwater, Oklahoma

PN I - 1393-C

ASSIGNMENT SHEET #3

3. Patricia J. Sellers, a patient in 311, has been admitted for a tubal ligation in the morning. Dr. Tripplet has ordered a clean catch/midstream urinalysis to be done and a UCG preoperatively. Patient number 67350. Use today's date and your name and title.



URINALYSIS

69771 11012-45 FORM 2704 FENTON'S, STILLWATER, OKLA.

☐ Routine ☐ Stat ☐ Today Time A.M. P.M.	☐ Void ☐ Cath. ☐ Clean Catch	RN:	Date Collected	Technologist	Lab. No.	Code	Charges
		Date	Time Collected	Time Completed			
	Date to be done	Diagnosis	Collected By	Date Completed			
TIME IN LAB			TIME OUT LAB				

☐ Color ☐ Character

Specific Gravity		WBC		Pregnancy Test (Slide)	
pH		RBC		Pregnancy Test (UCG)	
Protein		Epith. Cells		Remarks	
Glucose		Bacteria			
Acetone		Casts /LPF			
Bile					
Occult Blood		Crystals			
Urobilinogen					

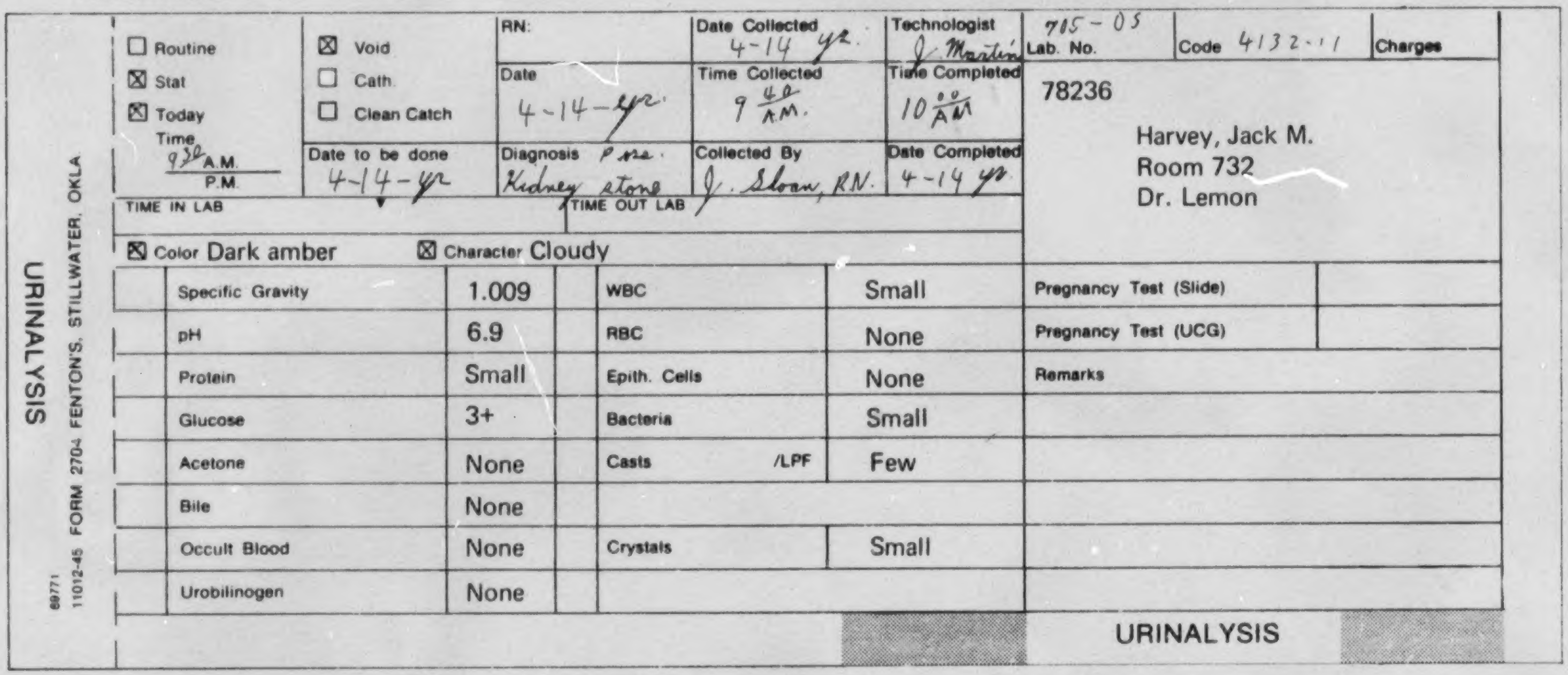
URINALYSIS

Used with permission of Fenton Office Supply Company, Stillwater, Oklahoma

ASSIGNMENT SHEET #3

4. Noted in chart: ______________________________

Persons notified: ______________________________



URINALYSIS

69771 11012-45 FORM 2704 FENTON'S, STILLWATER, OKLA

☐ Routine ☒ Stat ☒ Today Time 9 30 A.M. / P.M.	☒ Void ☐ Cath. ☐ Clean Catch	RN:	Date Collected 4-14 yr.	Technologist J. Martin	Lab. No. 705 - 05	Code 4132-11
		Date 4-14-yr.	Time Collected 9 40 AM.	Time Completed 10 00 AM	78236	Charges
	Date to be done 4-14-yr	Diagnosis Poss. Kidney stone	Collected By J. Sloan, RN.	Date Completed 4-14 yr		
TIME IN LAB		TIME OUT LAB				

Harvey, Jack M.
Room 732
Dr. Lemon

☒ Color Dark amber ☒ Character Cloudy

Specific Gravity	1.009	WBC	Small	Pregnancy Test (Slide)	
pH	6.9	RBC	None	Pregnancy Test (UCG)	
Protein	Small	Epith. Cells	None	Remarks	
Glucose	3+	Bacteria	Small		
Acetone	None	Casts /LPF	Few		
Bile	None				
Occult Blood	None	Crystals	Small		
Urobilinogen	None				

URINALYSIS

Used with permission of Fenton Office Supply Company, Stillwater, Oklahoma

PN I - 1395-C

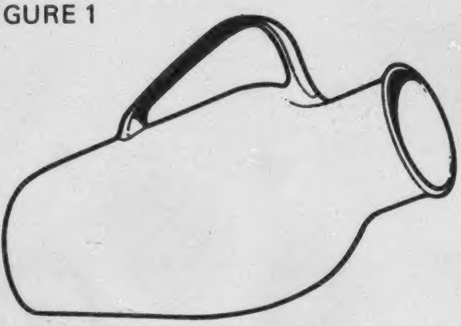
URINARY SYSTEM AND FLUID BALANCE
UNIT XII

JOB SHEET #1--ASSIST IN USE OF URINAL

I. Equipment

  A. Urinal (Figure 1)

  FIGURE 1



  B. Cover

  (NOTE: This may be a special disposable cover, or a paper towel.)

II. Procedure for assisting

  A. Take covered urinal to patient's bedside

  (NOTE: Usually urinal will be placed in the bedside unit ready for use.)

  B. Place covered urinal within reach of patient, if able to use without further assistance

  C. Assist patient as needed

    1. Expose patient as needed
    2. Separate patient's legs to permit placement of urinal
    3. Place the penis into the urinal far enough that it does not slip out as patient begins to urinate
    4. Hold the urinal in place if necessary

  D. Place communication device within reach if patient is using urinal without assistance

JOB SHEET #1

E. Remove covered urinal from unit
    1. Measure urine if needed
    2. Save specimen if needed

F. Rinse urinal with cold water; use brush if necessary to clean and return to storage area

G. Wash hands

H. Assist patient to wash hands

I. Make patient comfortable

J. Wash hands

K. Record amount of urine and its characteristics

JOB SHEET #1

III. Checklist for assisting in use of urinal

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments:		
B. Took covered urinal to patient's bedside	☐	☐
Comments:		
C. Placed covered urinal within reach of patient, if patient was able to use without further assistance	☐	☐
Comments:		
D. To assist patient, exposed patient as needed; separated patient's legs to permit placement of urinal	☐	☐
Comments:		
E. Placed the penis into the urinal far enough that it did not slip out as patient began to urinate	☐	☐
Comments:		

JOB SHEET #1

	Performed well	Needs improvement
F. Held the urinal in place if necessary	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
G. Placed communication device within reach if patient was using urinal without assistance	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
H. To remove covered urinal from unit, measured urine if needed; saved specimen if needed	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
I. Rinsed urinal with cold water; used brush if necessary to clean and returned to storage area	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
J. Washed hands	☐	☐

Comments: ______________________________

____

____

JOB SHEET #1

		Performed well	Needs improvement
K.	Assisted patient to wash hands; made patient comfortable	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
L.	Washed hands	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
M.	Recorded amount of urine and its characteristics	☐	☐

Comments: ______________________________

____

____

URINARY SYSTEM AND FLUID BALANCE
UNIT XII

JOB SHEET #2--COLLECT A URINE SPECIMEN

I. Equipment

   A. Bedpan or urinal

   B. Covered specimen container

   C. Label

   D. Requisition

   E. Graduate container

II. Procedure

   A. Wash hands

   B. Fill out label and laboratory requisition

   C. Identify patient and explain procedure

   D. Provide privacy

   E. Give bedpan or urinal

   F. After obtaining specimen, take bedpan or urinal to utility room

   G. Pour urine into a graduate container

   H. Pour urine into specimen container

   I. Cover specimen container, attach label, and set in safe place

   J. Clean bedpan and return to designated area

   K. Provide for patient's comfort

   L. Wash hands

   M. Take or send specimen to laboratory

   N. Chart procedure and observations

JOB SHEET #2

III. Checklist for collecting a urine specimen

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments:		
B. Washed hands	☐	☐
Comments:		
C. Filled out label and laboratory requisition	☐	☐
Comments:		
D. Identified patient and explained procedure	☐	☐
Comments:		
E. Provided privacy	☐	☐
Comments:		
F. Gave bedpan or urinal	☐	☐
Comments:		

JOB SHEET #2

	Performed well	Needs improvement
G. After obtaining specimen, took bedpan or urinal to utility room	☐	☐
Comments:		
H. Poured urine into a graduate container	☐	☐
Comments:		
I. Poured urine into specimen container	☐	☐
Comments:		
J. Covered specimen container, attached label, and set in safe place	☐	☐
Comments:		
K. Cleaned bedpan and returned to designated area	☐	☐
Comments:		

JOB SHEET #2

		Performed well	Needs improvement
L.	Provided for patient's comfort	☐	☐
	Comments:		
M.	Washed hands	☐	☐
	Comments:		
N.	Took or sent specimen to laboratory	☐	☐
	Comments:		
O.	Charted procedure and observations	☐	☐
	Comments:		

URINARY SYSTEM AND FLUID BALANCE
UNIT XII

JOB SHEET #3--OBTAIN A CLEAN CATCH/MIDSTREAM SPECIMEN

I. Equipment

- A. Sterile urine specimen bottle with cover
- B. Label
- C. Requisition
- D. Cleaning agent
- E. Water
- F. Cotton balls
- G. Sterile gloves (for nurse)

II. Procedure for female bed patient

- A. Fill out label and laboratory requisition
- B. Wash hands
- C. Assemble equipment and take to bedside
- D. Identify patient and explain procedure
- E. Screen patient; provide privacy
- F. Drape patient with a bath blanket or cover so the perineum is exposed
- G. Place patient on bedpan
- H. Place equipment on bed between patient's feet
- I. Wash hands
- J. Put on gloves
- K. Cleanse the vulva
    1. Expose urinary meatus by spreading vulva open using thumb and index finger
    2. Moisten cotton ball in cleaning agent, usually liquid soap
    3. Cleanse area with one wipe from pubis to anus, discard cotton ball

JOB SHEET #3

4. Repeat cleansing approximately four more times until area around the urethra is free of secretions

5. Rinse with water; dry with cotton balls

L. Have patient void a small amount in bedpan

M. Place the bottle to catch midstream flow

N. Allow patient to finish voiding in bedpan

O. Cover bottle; rinse and wipe the outside without getting any water on the cap

P. Remove gloves

Q. Remove bedpan and provide for patient's comfort

R. Clean equipment and return to designated area

S. Label and take or send the specimen to the laboratory

T. Report and record procedure

(NOTE: If clean catch/midstream kit is used, follow manufacturer's instructions.)

III. Procedure for female ambulatory patient

A. Fill out label and laboratory requisition

B. Wash hands

C. Assemble equipment and take to bedside

D. Instruct patient

1. While holding labia open with thumb and index finger, cleanse area from front to back using one cotton ball for each stroke

2. Repeat cleansing three or more times, once on each side of labia and once down center over urinary meatus

3. While still spreading labia, commence voiding, allowing first of stream to flow into toilet

4. Catch only midstream urine in a sterile specimen bottle

5. Complete voiding in toilet

6. Cover specimen bottle

JOB SHEET #3

E. After specimen is obtained, rinse and dry outside of bottle

F. Wash hands

G. Label and take or send specimen to laboratory

H. Care for equipment

I. Report and record procedure

IV. Procedure for male ambulatory patient

A. Fill out label and laboratory requisition

B. Wash hands

C. Assemble equipment and take to bedside

D. Identify patient and explain procedure

E. Instruct patient

1. Cleanse the glans penis with a circular motion, beginning at the meatus and working away from it
2. Repeat cleansing with three or four cotton balls and the cleansing solution
3. Rinse with water
4. Void a small amount into toilet
5. Catch only midstream urine in a sterile specimen bottle
6. Complete voiding in toilet
7. Cover specimen bottle

F. Rinse and dry outside of bottle

G. Wash hands

H. Label and take or send specimen to laboratory

I. Care for equipment

J. Report and record procedure

(NOTE: For bed patient procedure is similar except patient is placed on bedpan and assisted as needed by the nurse.)

JOB SHEET #3

V. Checklist for obtaining a clean catch/midstream specimen for female bed patient

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
B. Filled out label and laboratory requisition	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
C. Washed hands; assembled equipment and took to bedside	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
D. Identified patient and explained procedure	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
E. Screened patient; provided privacy	☐	☐

Comments: ______________________________

____

____

1414-C

JOB SHEET #3

		Performed well	Needs improvement
F.	Draped patient with a bath blanket or cover so the perineum was exposed	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
G.	Placed patient on bedpan	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
H.	Placed equipment on bed between patient's feet	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
I.	Washed hands; put on gloves	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
J.	To cleanse vulva, exposed urinary meatus by spreading vulva open using thumb and index finger	☐	☐

Comments: ______________________________

____

____

JOB SHEET #3

	Performed well	Needs improvement
K. Moistened cotton ball in cleaning agent, usually liquid soap	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
L. Cleansed area with one wipe from pubis to anus; discarded cotton ball	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
M. Repeated cleansing approximately four more times until area around urethra was free of secretions	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
N. Rinsed with water; dried with cotton balls	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
O. Had patient void a small amount in bedpan	☐	☐

Comments: ______________________________

____

____

JOB SHEET #3

	Performed well	Needs improvement
P. Placed the bottle to catch midstream flow	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
Q. Allowed patient to finish voiding in bedpan	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
R. Covered bottle; rinsed and wiped the outside without getting any water on the cap	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
S. Removed gloves	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
T. Removed bedpan and provided for patient's comfort	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
U. Cleaned equipment and returned to designated area	☐	☐

Comments: ______________________________

____

____

JOB SHEET #3

		Performed well	Needs improvement
V.	Labeled and took or sent the specimen to the laboratory	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
W.	Reported and recorded procedure	☐	☐

Comments: ______________________________

____

____

VI. Checklist for obtaining a clean catch/midstream specimen for female ambulatory patient

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
B.	Filled out label and laboratory requisition	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
C.	Washed hands; assembled equipment and took to bedside	☐	☐

Comments: ______________________________

____

____

JOB SHEET #3

		Performed well	Needs improvement
D.	Instructed patient to hold labia open with thumb and index finger and cleanse area from front to back using one cotton ball for each stroke	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
E.	Instructed patient to repeat cleansing three or more times, once on each side of labia and once down center over urinary meatus	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
F.	With labia spread, instructed patient to commence voiding, allowing first of stream to flow into toilet	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
G.	Instructed patient to catch only midstream urine in a sterile specimen bottle	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
H.	Instructed patient to complete voiding in toilet	☐	☐

Comments: ____________________

____

____

JOB SHEET #3

		Performed well	Needs improvement
I.	Instructed patient to cover specimen bottle	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
J.	After specimen was obtained, rinsed and dried outside of bottle	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
K.	Washed hands	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
L.	Labeled and took or sent specimen to laboratory	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
M.	Cared for equipment	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
N.	Reported and recorded procedure	☐	☐

Comments: ____________________

____

____

JOB SHEET #3

VII. Checklist for obtaining a clean catch/midstream specimen for male ambulatory patient

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments:		
B. Filled out label and laboratory requisition	☐	☐
Comments:		
C. Washed hands	☐	☐
Comments:		
D. Identified patient and explained procedure	☐	☐
Comments:		
E. Instructed patient to cleanse the glans penis with a circular motion, beginning at the meatus and working away from it	☐	☐
Comments:		

JOB SHEET #3

		Performed well	Needs improvement
F.	Instructed patient to repeat cleansing with three or four cotton balls and the cleansing solution	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
G.	Instructed patient to rinse with water	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
H.	Instructed patient to void a small amount into toilet	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
I.	Instructed patient to catch only midstream urine in a sterile specimen bottle	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
J.	Instructed patient to complete voiding in toilet	☐	☐

Comments: ______________________________

____

____

JOB SHEET #3

		Performed well	Needs improvement
K.	Instructed patient to cover specimen bottle	☐	☐
	Comments: ______________________________		
L.	Rinsed and dried outside of bottle	☐	☐
	Comments: ______________________________		
M.	Washed hands	☐	☐
	Comments: ______________________________		
N.	Labeled and took or sent specimen to laboratory	☐	☐
	Comments: ______________________________		
O.	Cared for equipment	☐	☐
	Comments: ______________________________		
P.	Reported and recorded procedure	☐	☐
	Comments: ______________________________		

URINARY SYSTEM AND FLUID BALANCE
UNIT XII

JOB SHEET #4--COLLECT A 24-HOUR/CUMULATIVE/COMPLETE SPECIMEN

I. Equipment

  A. Receptacle for storing urine

  B. Bedpan or urinal

  C. Graduate container

  D. Labels

  E. Requisition

II. Procedure

  A. Wash hands as needed throughout procedure

  B. Obtain storage receptacles from laboratory and label them

  C. Place receptacles in designated area

  D. Give a detailed explanation to the patient of the procedure; stress the importance of collecting all urine passed during required time

  E. Put signs at patient's bedside and in bathroom or utility room stating that a 24-hour urine specimen is being kept

  F. Inform patient if he or she is on a specific liquid intake

  G. At the beginning of the time period, have patient void and DISCARD this first specimen; all other urine for the specified time period will be saved, measured, and poured into storage receptacle

  H. At the end of the time period, have patient void and add this last specimen to the collection

  I. When the collection is completed, inform patient and remove signs

  J. Label and take or send specimens to laboratory

  K. Report and record procedure

  (NOTE: These directions can be used for a cumulative or fractional 24-hour specimen. If the urine is to be collected for three or four time periods during the 24-hour period, the initial specimen is discarded; all other specimens including the one at the end of the time period are saved. At the end of each period, the collected urine is labeled and sent to the laboratory with the proper requisition.)

JOB SHEET #4

III. Checklist for collecting a 24-hour/cumulative/complete specimen

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ________________ ________________ ________________		
B. Washed hands as needed throughout procedure	☐	☐
Comments: ________________ ________________ ________________		
C. Obtained storage receptacles from laboratory and labeled them	☐	☐
Comments: ________________ ________________ ________________		
D. Placed receptacles in designated area	☐	☐
Comments: ________________ ________________ ________________		
E. Gave a detailed explanation of the procedure to the patient; stressed the importance of collecting all urine passed during required time	☐	☐
Comments: ________________ ________________ ________________		

JOB SHEET #4

		Performed well	Needs improvement
F.	Put signs at patient's bedside and in bathroom or utility room stating that a 24-hour urine specimen was being kept	☐	☐
	Comments:		
G.	Informed patient if he or she was on a specific liquid intake	☐	☐
	Comments:		
H.	At the beginning of the time period had patient void and discarded this first specimen; all other urine for the specified time period was saved, measured, and poured into storage receptacle	☐	☐
	Comments:		
I.	At the end of the time period, had patient void and added this last specimen to the collection	☐	☐
	Comments:		
J.	When the collection was completed, informed patient and removed signs	☐	☐
	Comments:		

JOB SHEET #4

		Performed well	Needs improvement
K.	Labeled and took or sent specimens to laboratory	☐	☐
	Comments: ______________________________		
L.	Reported and recorded procedure	☐	☐
	Comments: ______________________________		

URINARY SYSTEM AND FLUID BALANCE
UNIT XII

TEST

NAME ______________________________ SCORE ____________

1. Match terms associated with the urinary system to the correct definitions. Write the correct numbers in the blanks. Definitions are continued on the next page.

_____a. Kidney stone

_____b. Chief nitrogenous component of urine

_____c. Near the kidney

_____d. Study of the kidney

_____e. Weight of a substance compared with an equal volume of water

_____f. Process of giving off a specific product as a result of the activity of a gland

_____g. Fibrous material thrown off in various pathological conditions

_____h. Study of the urinary system

_____i. Pertaining to the kidney

_____j. Removing useless substances (waste products of cell metabolism) from the blood and lymph

_____k. Receptacle used for urination

_____l. Pertaining to or composed of blood vessels

_____m. Discharge of indigestible materials and waste products of metabolism from the body

_____n. Tube for carrying urine from the bladder to the outside of the body

_____o. State of being stretched out or overfilled

_____p. External opening of the urethra

_____q. Pertaining to the liver

1. Nephrology
2. Excretion
3. Secretion
4. Elimination
5. Renal calculus
6. Adrenal
7. Renal
8. Urinal
9. Urethra
10. Urea
11. Vascular
12. Urinary casts
13. Specific gravity
14. Urology
15. Hepatic
16. Distention
17. Ureter
18. Nephron
19. Hilum
20. Urinary meatus

_____r. Tube which carries urine from the kidney to the bladder

_____s. Basic functional unit of the kidneys

_____t. Depression or recess at exit or entrance of a duct, nerve, or vessel into a gland

2. Describe the excretory systems and their waste products.

a. Skin or integumentary system-- ____________________

____

b. Respiratory system-- ____________________

____

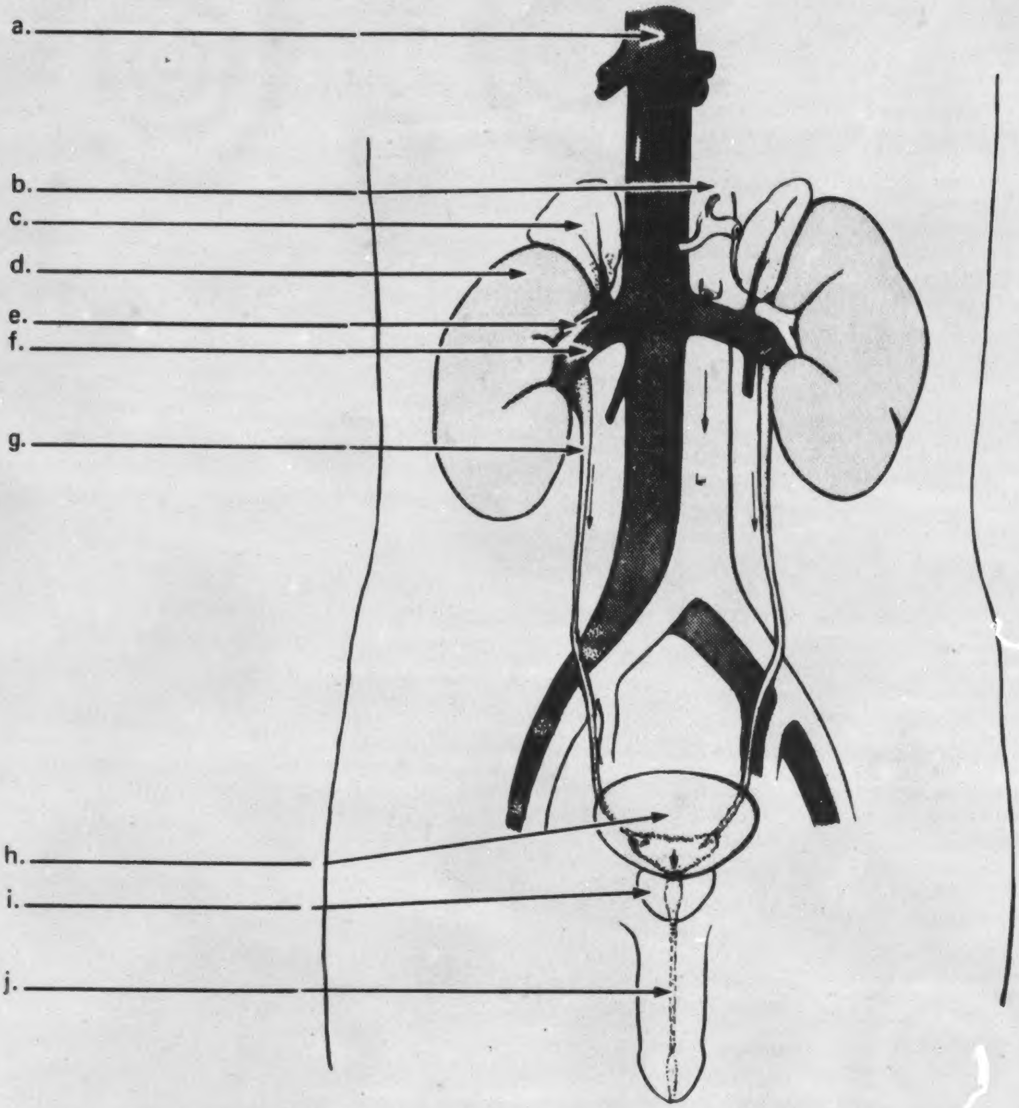
c. Digestive system-- ____________________

____

d. Urinary system-- ____________________

____

3. Label structures of the urinary system including blood vessel supply. Write the correct words in the blanks.



4. Describe the location and structure of the kidneys.

   a. Location-- ______________________________

   b. Structure-- ______________________________

5. Select from the following list main functions of the kidneys. Write an "X" in the correct blanks.

_____a. Aid in fighting infection

_____b. Storage of glucose

_____c. Assistance in maintaining the water balance of the body

_____d. Storage of urine

_____e. Excretion of waste products

_____f. Assistance in regulating the acid-base balance of the body

_____g. Responsibility for electrolyte balance

6. Match principal parts of the kidney and nephron to the correct descriptions. Write the correct numbers in the blanks. Definitions are continued on the next page.

_____a. Funnel-shaped structure partially enclosing the glomerulus that receives waste, water, glucose, and salts from the thin capillaries

_____b. Inner portion of the kidney where the nephron tubes come together in the collecting tubules

_____c. Bell-shaped cup in the renal pelvis

_____d. Cluster of capillaries that filters blood as it comes from the renal arteries

_____e. Smooth, solid portion of the kidney where the greater part of the nephron is located

1. Cortex
2. Medulla
3. Calyx
4. Glomerulus
5. Bowman's capsule
6. Convoluted tubule
7. Collecting tubule
8. Renal basin or pelvis

_____f. Collects the remaining mixture of waste products and water (urine) that has passed through the convoluted tubule

_____g. Area where the upper ureter expands to form a basin which receives urine from the collecting tubules

_____h. Long, twisted tube that carries most of the water and salts and all glucose to be reabsorbed by bloodstream

7. Distinguish between structure and functions of the ureter and the bladder. Write a "U" for ureter and a "B" for bladder in the correct blanks.

_____a. Receives and holds urine

_____b. Is capable of holding a liter or more of urine in the adult

_____c. Consists of narrow tubes approximately 1/8" (four-five mm) in diameter and 10-12" (25-30 cm) in length, is attached to the kidney at the renal pelvis and empties into the urinary bladder

_____d. Is thick and folded when empty, but begins to stretch out as it fills and the wall becomes thinner

_____e. Has three openings in wall

_____f. Moves urine from kidneys to bladder by rhythmic contractions of the muscle wall, similar to peristalsis in the digestive system

_____g. Is composed of many layers, including an inner mucous membrane lining, muscle layers, and connective tissue, and is partially covered with the peritoneum

8. Describe the structure and functions of the male and female urethra.

a. Male-- ____

____

____

____

____

b. Female-- ____

____

____

9. List terms that mean expelling urine.

a. ______________________________

b. ______________________________

c. ______________________________

10. Distinguish between normal and abnormal components of urine. Write an "N" for normal and an "A" for abnormal in the correct blanks.

_____a. Casts

_____b. Yellow pigment from certain bile compounds

_____c. Albumin (albuminuria)

_____d. Water (95 percent)

_____e. Mineral salts (sodium chloride, sulfates, and phosphate)

_____f. Glucose (glycosuria)

_____g. Acetone (acetonuria)

_____h. Hormones

_____i. Protein waste products (urea, uric acid, creatinine)

_____j. Pus cells (pyuria)

_____k. Toxins

_____l. Blood (hematuria)

11. Describe characteristics of normal urine.

a. Total volume in 24 hours-- ______________________________

b. Color-- ______________________________

c. Appearance-- ______________________________

d. Odor-- ______________________________

e. Reaction (pH)-- ______________________________

f. Specific gravity-- ______________________________

12. Select from the following list functions of water in the body. Write an "X" in the correct blanks.

______a. Prevents deterioration of skeletal system

______b. Assists in the regulation of body temperature

______c. Transports oxygen

______d. Transports nutrients from the digestive tract to the bloodstream and from one cell to another

______e. Aids digestion by softening, diluting, and liquefying foods

______f. Is a component of urticaria

______g. Removes waste products through intestines, kidneys, skin, and lungs

______h. Prevents atrophy

______i. Is found only in epidermis

______j. Lubricates joints and moistens viscera for easier movement

______k. Aids in combating stress

______l. Is an essential constituent of all tissues and fluids

13. List ways the body normally excretes water from its system.

a. ____________________

b. ____________________

c. ____________________

d. ____________________

14. List ways in which the body loses water abnormally.

a. ____________________

b. ____________________

c. ____________________

d. ____________________

e. ____________________

f. ____________________

g. ____________________

h. ____________________

15. Match terms associated with fluid balance to the correct definitions. Write the correct numbers in the blanks.

_____a. Secretion from the adrenal glands which affects the retention or excretion of sodium, potassium, and water

_____b. Substance contained in the spaces between cells

_____c. Outside the cell

_____d. Excessive secretion and excretion of urine

_____e. Loss of water from the body or tissues

_____f. Profuse perspiration

_____g. Accurate record of all liquids taken by a patient and accurate measurement of all urine, vomitus, drainage, or other liquid lost from the body

_____h. Within the cell

_____i. Fullness of tissue related to the amount of fluid surrounding the cells

_____j. Space between the two layers of the peritoneum

_____k. Local or generalized condition in which body tissues contain an excessive amount of tissue fluid

_____l. Measuring device marked in cubic centimeters

_____m. Solution which conducts electricity

_____n. Excessive accumulation of fluid in the peritoneal cavity

_____o. Maintain the level of ionized calcium in the blood and regulate the kidneys' conservation of magnesium

1. Electrolyte
2. Interstitial fluid
3. Intracellular
4. Extracellular
5. Polyuria
6. Aldosterone
7. Parathyroid glands
8. Dehydration
9. Intake and output
10. Edema
11. Ascites
12. Peritoneal cavity
13. Tissue turgor
14. Graduate container
15. Diaphoresis

_____p. Agent or medication that increases urinary output

_____q. Small, gray, rounded body attached to the base of the brain that secretes hormones which regulate many body processes

_____r. Suppression of urinary output

_____s. Diminished urinary output

_____t. Fluids given into the tissue under the skin; primarily to infants and the elderly

16. Diuretic
17. Pituitary gland
18. Oliguria
19. Anuria
20. Hypodermoclysis

16. List ways that kidneys monitor fluid balance.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

17. Distinguish between symptoms of water loss and water retention. Write a "WL" for water loss and a "WR" for water retention in the correct blanks. Some answers may be used more than once.

_____a. Oligura and anuria

_____b. Headache

_____c. Moist skin

_____d. Weakness

_____e. Dry skin and mucous membranes

_____f. Intake greater than output

_____g. Bounding pulse

_____h. Nausea

_____i. Fever

_____j. Muscle cramps

_____k. Edematous, dry tongue

_____l. Confusion, poor coordination

______m. Hypertension

______n. Fall in blood pressure and weak, rapid pulse

______o. Difficulty in speaking

______p. Convulsions, possible coma

______q. Thirst

______r. Edema, particularly in feet, ankles, face, and fingers

______s. Weight gain

18. Describe observations to be made when assessing the urinary system and fluid balance.

a. Read patient's chart to find out diagnosis or condition-- ______

b. Look at and interpret urinalysis reports, if available-- ______

c. Anticipate kind of fluid balance problem according to what type of condition is present-- ______

d. Check patient for changes in specific vital signs--

e. Observe veins, speech patterns, and skin condition--

f. Observe overall appearance--

g. Note responses to questions about intake and output of fluids--

19. Describe normal daily requirements of water.

a. ________________________________

b. ________________________________

20. List characteristics of urination to observe.

a. ________________________________

b. ________________________________

c. ________________________________

d. ________________________________

21. Select from the following list points to remember in keeping an accurate intake and output chart. Write an "X" in the correct blanks.

_____ a. Check patient's tray before and after serving to determine intake

_____ b. Omit measurement of body excreta

_____ c. Gain cooperation from patient and family in obtaining an accurate amount measured for intake and output

_____ d. Measure urinary output each time bedpan or urinal is emptied, using the graduated pitcher

_____ e. Measure only oral intake

_____ f. Make sure there is an I and O form at the bedside for each eight-hour shift to record intake and output

_____ g. Measure and record any other body discharges such as vomitus, diarrhea, those in the suction apparatus, and drainage on dressings

_____ h. Measure only chilled liquids

_____ i. Convert all measurements to household equivalents

_____ j. Measure water before emptying pitcher to obtain fresh water to determine the amount which has been taken

22. List fluids which must be measured for intake.

a. ________________________________

b. ________________________________

c. ________________________________

d. ________________________________

e. ________________________________

f. ________________________________

23. Select from the following list fluids which must be measured for output. Write an "X" in the correct blanks.

_____a. Vomitus

_____b. Intravenous fluids

_____c. Urine

_____d. Tears

_____e. Estimated amount of hemorrhage, drainage, diarrhea, and/or perspiration

_____f. Flatus

_____g. Fluid from suction devices

24. Match terms associated with collection of specimens to the correct definitions. Write the correct number in the blanks.

_____a. Growing of microorganisms in a special substance in a laboratory setting

_____b. Painful urination

_____c. Presence of albumin in the urine

_____d. Tubular instrument of rubber, plastic, metal, or other material, used for draining or injecting fluids through a body passage

_____e. Presence of glucose in the urine

_____f. External opening of the female reproductive system that surrounds the opening of the vagina

_____g. Presence of blood in the urine

_____h. Laboratory determination of the reaction of cultured organisms to various medications

_____i. Small sample or part of something taken to show the nature of the whole

1. Catheter
2. Culture
3. Sensitivity
4. Albuminuria
5. Hematuria
6. Glycosuria
7. Dysuria
8. Specimen
9. Vulva

25. State guidelines for collecting specimens.

a. ____

____

b. ____

____

c. ______________________________

____

d. ______________________________

____

e. ______________________________

____

f. ______________________________

____

g. ______________________________

____

h. ______________________________

____

i. ______________________________

____

26. Describe types of urine specimens and their collection.

a. Routine specimen-- ______________________________

____

____

____

____

b. Clean catch/midstream specimen-- ______________________________

____

____

____

____

c. Twenty-four hour/cumulative/complete specimen-- ____________________

____

____

____

____

d. Diabetic specimen-- ____________________

____

____

____

____

e. Catheterized specimen-- ____________________

____

____

____

____

____

____

27. Match methods of collecting urine to their purposes. Write the correct numbers in the blanks.

_____a. Used for culture and sensitivity of disease organisms

_____b. Determines presence of foreign substance or microorganisms

_____c. May determine how much insulin the patient should receive, helps in determining the status of the condition, and what type of diet the patient should receive

_____d. Aids in diagnosis and determining progress of a disease, determines kidney and cardiac function, and determines the type of organism in an infection of the urinary system

_____e. Determines wastes the kidneys are excreting and the amount of each type

1. Routine specimen
2. Clean catch/ midstream specimen
3. Twenty-four hour/ cumulative/complete specimen
4. Diabetic specimen
5. Catheterized specimen

28. Assess the urinary system and fluid balance.

29. Calculate intake.

30. Fill out and report on requisitions for urinalysis.

31. Demonstrate the ability to:

    a. Assist in use of urinal.

    b. Collect a urine specimen.

    c. Obtain a clean catch/midstream specimen.

    d. Collect a 24-hour/cumulative/complete specimen.

    (NOTE: If activities 28-31 have not been finished before the test, ask your instructor when they should be completed.)

URINARY SYSTEM AND FLUID BALANCE
UNIT XII

ANSWERS TO TEST

1. a. 5
   b. 10
   c. 6
   d. 1
   e. 13
   f. 3
   g. 12
   h. 14
   i. 7
   j. 2
   k. 8
   l. 11
   m. 4
   n. 9
   o. 16
   p. 20
   q. 15
   r. 17
   s. 18
   t. 19

2. Descriptions should include:

   a) Skin or integumentary system--Perspiration composed of water, salts, and small quantities of nitrogenous wastes

   b) Respiratory system--Vapor composed of water, carbon dioxide, and other gases

   c) Digestive system--Feces or fecal material composed of water, bile, some salts, undigested foods, mucus, and bacteria

   d) Urinary system--Urine composed of water, salts, and nitrogenous waste products

3. a. Inferior vena cava
   b. Abdominal aorta
   c. Adrenal gland (2)
   d. Kidney (2)
   e. Renal artery (2)
   f. Renal vein (2)
   g. Ureter (2)
   h. Urinary bladder
   i. Prostate gland
   j. Urethra

4. Descriptions should include:
   a. Location
      1) Kidneys lie against the muscles of the back under the dome of the diaphragm, protected somewhat by the ribs and their cartilages, and behind the peritoneum
      2) Blood vessels and nerves enter the kidney at the hilum
      3) Ureter leaves the kidney at the hilum
   b. Structure
      1) Bean-shaped organs that are reddish-brown
      2) Kidneys are embedded in fatty tissue surrounded by a fibrous tissue called renal fascia
5. c, e, f
6. a. 5
   b. 2
   c. 3
   d. 4
   e. 1
   f. 7
   g. 8
   h. 6
7. a. B
   b. B
   c. U
   d. B
   e. B
   f. U
   g. B
8. Descriptions should include:
   a. Male
      1) Is part of both the reproductive and urinary systems
      2) Is approximately eight inches or 20 cm long in the adult
      3) Passes through the prostate gland, where two ducts from the reproductive glands join it, and then through the penis to the outside
   b. Female
      1) Is a thin-walled tube approximately one to one and one-half inches or four cm long
      2) Is embedded in the anterior muscle wall of the vagina

9. a. Voiding
   b. Urination
   c. Micturition

10. a. A
    b. N
    c. A
    d. N
    e. N
    f. A
    g. A
    h. N
    i. N
    j. A
    k. N
    l. A

11. Description should include:
    a) Total volume in 24 hours--Approximately 1,500 cc
    b) Color--Straw
    c) Appearance--Clear
    d) Odor–Mild, aromatic
    e) Reaction (pH)--6.0 (slightly acid)
    f) Specific gravity--1.015-1.025

12. b, d, e, g, j, l

13. a. Through the kidneys in urine
    b. Through the gastrointestinal tract in feces
    c. Through the skin in perspiration
    d. Through the lungs as expired vapor

14. a. Vomiting
    b. Diarrhea
    c. Hemorrhage
    d. Excessive perspiration
    e. Extensive burns
    f. Uncontrolled diabetes mellitus
    g. Fever
    h. Open or draining wounds

15. a. 6
b. 2
c. 4
d. 5
e. 8
f. 15
g. 9
h. 3
i. 13
j. 12
k. 10
l. 14
m. 1
n. 11
o. 7
p. 16
q. 17
r. 19
s. 18
t. 20

16. a. Through concentration of specific electrolytes
b. Through osmolality of body fluids
c. Through volume of extracellular fluid
d. Through blood volume
e. Through blood pH

17. a. WL
b. WR
c. WR
d. WL
e. WL
f. WR
g. WR
h. WR
i. WL
j. WL, WR
k. WL
l. WR
m. WR
n. WL
o. WL
p. WR
q. WL
r. WR
s. WR

18. Descriptions should include:

    a. Read patient's chart to find out diagnosis or condition

        1) The condition may indicate some fluid balance problems

        2) Other conditions may cause a secondary problem that will cause fluid balance problems

    b. Look at and interpret urinalysis reports, if available

        1) Values such as the blood urea nitrogen (BUN), albumin, pH, specific gravity, glucose, and a microscopic examination can indicate what is happening to the patient

        2) Reports will usually have the normal values next to the patient's levels; therefore, abnormal levels should be recognizable

    c. Anticipate kind of fluid balance problem according to what type of condition is present

        1) Problem will be a deficit of sodium, potassium, or magnesium and chloride, if the loss is through gastric juices

        2) Excessive perspiration may lead to a sodium and water deficit

        3) Loss through open wounds may lead to deficits in water, sodium, calcium, and protein

    d. Check patient for changes in specific vital signs

        1) Elevated fever may result in fluid loss because metabolism is increased

        2) Fever increases respiratory rate and results in water vapor loss from the lungs

        3) Increased pulse rate may indicate a loss of sodium or magnesium and a decreased pulse rate may indicate an excess of magnesium

    e. Observe veins, speech patterns, and skin condition

        1) Veins will be less visible than usual when the volume of fluid is low and they will be engorged and very visible if body fluid rises

        2) Speech patterns will show changes in fluid loss by becoming slower and sluggish

        3) Skin that is pinched up and falls back naturally is well-hydrated and has elasticity, whereas skin that is dehydrated may remain raised when pinched

f. Observe overall appearance

   1) Dehydration will cause the patient to look drawn, and the eyes will be sunken

   2) Edema will cause the patient to look puffy; this is usually seen in the eyelids and cheeks, and sometimes the hands, feet, and ankles

g. Note responses to questions about intake and output of fluids

   1) Information concerning how much fluid the patient takes in during the day and what type of fluid is valuable

   2) Specific information on how much the patient voids every 24 hours and the amount each time can be important

19. a. Six-eight glasses of water daily is recommended for an average adult

    b. More is required in certain conditions

20. a. Amount

    b. Frequency, urgency, discomfort, or pain

    c. Color and transparency

    d. Unusual odor

21. a, c, d, f, g, j

22. a. All liquids, hot and cold

    b. Ice cream, milk shakes, sherbet

    c. Gelatin

    d. Broth or soup

    e. Ice chips

    f. Intravenous fluids

23. a, c, e, g

24. a. 2

    b. 7

    c. 4

    d. 1

    e. 6

    f. 9

    g. 5

    h. 3

    i. 8

25. a. Follow the procedures for your particular institution

    b. Make certain of the time, type, and amount of specimen to be collected

    c. Explain procedure to patient and/or family

    d. Use proper container; avoid overfilling or contaminating the outside of the container

    e. Label specimen correctly with patient's name and room number, time of collection, and type of specimen

    f. Complete correct requisitions to be sent with specimen

    g. Wash hands thoroughly after collecting specimen

    h. Send specimen to laboratory promptly or store at proper temperature with necessary preservatives

    i. Record the time, type of specimen, characteristics such as the color, appearance, and amount; include any significant patient observation

26. Descriptions should include:

    a. Routine specimen

       1) First voided specimen of the day (usually)

       2) Soap and water cleansing of the genital area immediately before obtaining the specimen is essential in female patients, due to the presence of numerous bacteria around the urethra

       3) Container can be a specimen cup

    b. Clean catch/midstream specimen

       1) Patient is instructed to cleanse the urethral area thoroughly

       2) Small amount is voided into the toilet to rinse the urethra

       3) Middle of the stream is voided into container provided

       4) Last urine is voided into the toilet

    c. Twenty-four hour/cumulative/complete specimen

       1) Receptacle for storing urine is labeled and placed in a refrigerator near patient's unit

       2) First or beginning specimen is obtained at a designated time and DISCARDED

       3) All other specimens are saved and poured into storage container

       4) The final voiding is collected and added 24 hours after the initial specimen

5) The entire amount for the 24 hours is collected

d. Diabetic specimen

1) First specimen should be discarded, if possible, and the second specimen used for testing

2) Urine specimens are tested at the time they are obtained by the nurse

e. Catheterized specimen

1) Sterile technique should be used throughout procedure

2) Female patients assume a dorsal recumbent position while males may lie in supine position

3) Sterile urine is obtained by passing a small tube through the urinary meatus and urethra to the bladder

4) Specimen is put into a sterile container and sent to the laboratory with appropriate requisition

27. a. 5
    b. 2
    c. 4
    d. 1
    e. 3

28. Evaluated to the satisfaction of the instructor

29. Evaluated to the satisfaction of the instructor

30. Evaluated to the satisfaction of the instructor

31. Performance skills evaluated to the satisfaction of the instructor

NERVOUS SYSTEM AND SPECIAL SENSES
UNIT XIII

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of the nervous system and special senses to assist the physician in diagnostic procedures, to perform specific treatments, and to assess functioning of this system. This knowledge will be evidenced by completion of assignment sheet, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the nervous system to the correct definitions.
2. Select from a list functions of the nervous system.
3. Distinguish among divisions of the nervous system.
4. Match types of neurons to their functions.
5. Describe the layers of an axon.
6. Arrange in order the mechanism of regeneration of peripheral nerves.
7. List in order the actions of transmission of nerve signals.
8. Label the main sections of the central nervous system.
9. Match areas of the cerebral cortex to their functions.
10. Match parts of the brain to their correct functions.
11. Select from a list functions of the spinal cord.
12. Describe the protection of the central nervous system.
13. Describe vessels that supply blood to the brain.
14. Match the formation, purpose, and absorption of cerebrospinal fluid to the correct definitions.
15. Complete a chart showing names and specific functions of the cranial nerves.
16. List the spinal nerves and the number of pairs in each.
17. Describe the reflex arc.
18. Describe divisions of the autonomic nervous system.

19. Match terms associated with the special senses to the correct definitions.
20. List the basic senses.
21. Match eye and accessory structures to the correct functions.
22. Identify structures of the ear.
23. Discuss the sense of taste.
24. Discuss the sense of smell.
25. Describe reaction of taste buds.
26. Demonstrate the ability to:
    a. Test reflexes.
    b. Test cranial nerves.
    c. Measure vision.
    d. Test hearing.
    e. Irrigate ear.
    f. Examine eyes.
    g. Irrigate eyes.
    h. Administer eye, ear, and nose medications.

NERVOUS SYSTEM AND SPECIAL SENSES
UNIT XIII

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

  A. Provide students with objective sheet.

  B. Provide students with information sheet.

  C. Make transparencies.

  D. Discuss unit and specific objectives.

  E. Discuss information sheet.

  F. Obtain animal organs or use simulated models to demonstrate anatomy.

  Examples: Brain, tongue, eyes

  G. Obtain from local optometrist or ophthamologist a color perception chart to test color blindness and a Snellen chart to test vision.

  (NOTE: These and other materials are available from the National Society to Prevent Blindness, 79 Madison Avenue, New York, New York 10016.)

  H. Provide students with assignment sheet and job sheets.

  I. Provide equipment and demonstrate job sheets.

  J. Test vision and hearing of other staff members or other classes to give students an opportunity to practice job sheet skills.

  K. Give test.

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

  C. Transparency masters

    1. TM 1--A Typical Neuron

    2. TM 2--A Synapse

    3. TM 3--Human Nervous System

    4. TM 4--Sensory, Central, and Motor Neurons

5. TM 5--Regeneration of a Nerve Fiber
6. TM 6--Functional Areas of the Brain
7. TM 7--External Surface of the Brain
8. TM 8--The Cranial Nerves
9. TM 9--The Dermatomes
10. TM 10--Reflex Arc
11. TM 11--The Eye
12. TM 12--The Eye and Accessory Structures
13. TM 13--Intrinsic Muscles of the Eyeball
14. TM 14--Lacrimal Gland
15. TM 15--The Ear
16. TM 16--The Tongue and Taste
17. TM 17--The Nose and Sense of Smell

D. Assignment Sheet #1--Describe Reaction of Taste Buds

E. Job sheets

1. Job Sheet #1--Test Reflexes
2. Job Sheet #2--Test Cranial Nerves
3. Job Sheet #3--Measure Vision
4. Job Sheet #4--Test Hearing
5. Job Sheet #5--Irrigate Ear
6. Job Sheet #6--Examine Eyes
7. Job Sheet #7--Irrigate Eyes
8. Job Sheet #8--Administer Eye, Ear, and Nose Medications

F. Test

G. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study*. Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

B. Sloan, Jamee. *Medical Assistant.* Stillwater, Oklahoma: State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1981.

C. Memmler, Ruth, and Wood, Dena Lin. *The Human Body in Health and Disease.* Philadelphia: J.B. Lippincott Company, 1977.

D. Jacob, Stanley W.; Francone, Clarice; and Lossow, Walter. *Structure and Function in Man.* Philadelphia: W.B. Saunders Company, 1978.

IV. Additional materials:

A. Films:

(NOTE: The first two films are available on a free-loan basis to Oklahoma teachers *only* from the Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order from the addresses listed.)

1. *The Eye.* Color, 11 min., Films Inc., 1973. Available from Films Inc., National Sales Office, 733 Green Bay Road, Wilmette, Illinois 60091.

2. *Inner Ear.* Color, 11 min., Films Inc., 1973. Available from Films Inc., National Sales Office, 733 Green Bay Road, Wilmette, Illinois 60091.

3. *Sense of Hearing.* Available from Southwestern Bell Telephone Company.

   (NOTE: Call your local company for information.)

4. *You and Your Ears.* Color, 18 min., Oklahoma State Department of Health, 1964. Available from Oklahoma State Department of Health, Northeast 10th and Stonewall, Oklahoma City, Oklahoma 73104.

B. Filmstrips:

1. *The Special Senses.* Available from Robert J. Brady Company, Subsidiary of Prentice-Hall, Inc., Routes 197 and 450, Bowie, Maryland 20715.

   (NOTE: The following films are available from Trainex Corporation, Box 116, Garden Grove, California 92642.)

2. *Nervous System and the Cardiovascular System.*

3. *Physical Assessment: The Nervous System.*

4. *Caring for the Patient with a Hearing Impairment.*

5. *Emergency Eye Care.*

C. *Polar Motion Spinner and Transparencies*--Available from American Animation, Inc., Six East Spruce Street, Box 335, Moorestown, New Jersey 08157.

NERVOUS SYSTEM AND SPECIAL SENSES
UNIT XIII

INFORMATION SHEET

I. Terms associated with the nervous system (Transparencies 1 and 2)

A. Neurology--Study of the nervous system

B. Neuron--Basic nerve cell

C. Synapse--Junction of an axon and one or more dendrites

D. Nerve--Bundle of nerve fibers, blood vessels, and connective tissue outside the central nervous system

E. Nerve tract--Bundle of nerve cells within the central nervous system

F. Ganglion--Mass of nerve tissue, principally nerve cell bodies, outside the central nervous system

G. Nerve fibers--Threadlike projections of cytoplasm from the cell body of a neuron; axons and dendrites

H. Neuroglia--Supporting structure for nerve tissue consisting of blood vessels, connective tissue, and specialized cells

I. Gray matter--Nonmyelinated nervous tissue; primarily the bodies of nerve cells

J. White matter--Nervous tissue composed of myelinated nerve fibers

K. Cerebrospinal fluid--Watery fluid found in the ventricles of the cerebrum and surrounding the spinal cord

L. Ventricle--One of the small cavities of the brain

M. Stimulus--Any agent or influence that produces a response or increase in activity in living protoplasm

N. Regeneration--Repair, re-growth, or restoration of a part

O. Affector--Group of cells functioning in reception of stimuli; receiving end of sensory nerves

(NOTE: These are receptor nerves.)

P. Occipital--Pertaining to the back of the head

Q. Effector--Nerve endings that carry out actions

(NOTE: These are motor nerves.)

INFORMATION SHEET

R. Cerebral cortex--Outer layer of gray matter of the cerebrum

S. Cyton--Cell body that acts as a sending and receiving center, carries on metabolism, and stores energy

(NOTE: Cell bodies differ in size according to their function.)

T. Dendrite--Part of the neuron that carries impulses to the cell body

(NOTE: Dendrite means "tree-like." They are usually numerous, short-branched processes of the cell body differing in number, size, and length, depending on their location and function.)

U. Axon--Part of the neuron that conducts impulses away from the cell body; each cell has one

V. Cranial nerves--Twelve pairs that convey special and general sense impulses and control voluntary muscles, glands, and involuntary muscles

Examples: Smell, vision, hearing, pain, touch, temperature, deep muscle sense, pressure and vibration senses

W. Autonomic nervous system--Automatically regulates the action of the glands, the smooth muscles of the hollow organs, and the heart, often without one being aware of it

X. Central nervous system--Consists of nerve tissues that form the brain and spinal cord; controls voluntary acts

(NOTE: Tissue is made up of gray and white matter.)

Y. Peripheral nervous system--Provides input from sensory receptors to the central nervous system and output from the central nervous system to effectors

II. Functions of the nervous system (Job Sheet #1)

A. Reception of external stimuli

Examples: Heat, cold, sounds

B. Coordination of internal messages

Example: Hunger

C. Response and readjustment to internal and external stimuli

D. Storage of information (memory)

E. Coordination of all body activities

INFORMATION SHEET

III. Divisions of the nervous system (Transparency 3)

A. Central nervous system

1. Brain

2. Spinal cord

B. Peripheral nervous system

(NOTE: These nerves extend to outlying parts of the body.)

1. Cranial nerves

(NOTE: There are 12 pairs.)

2. Spinal nerves

(NOTE: There are 31 pairs.)

C. Autonomic nervous system (involuntary nervous system)

1. Glandular action

Examples:	Production of insulin from the beta cells of the pancreas; thyroxin from the thyroid

2. Smooth muscles of hollow organs

Example:	Small intestine

3. Cardiac muscle

(NOTE: There are two divisions of the autonomic nervous system. The sympathetic system accelerates some body processes and the parasympathetic helps to balance action of the sympathetic system.)

IV. Types of neurons and their functions (Transparency 4)

A. Afferent or sensory--Receive messages from all parts of the body and transmit them to the central nervous system

B. Internuncial, central, or connecting--Conduct messages or impulses from sensory to motor nerves

(NOTE: These are found only in the central nervous system.)

C. Efferent, or motor--Transmit messages from the central nervous system to all parts of the body

INFORMATION SHEET

V. Layers of an axon

   A. Axis cylinder--Central core of jelly-like material

   B. Myelin sheath--Fatty covering which provides insulation and speeds impulse conduction; nerve fibers covered with myelin are called myelinated

   (NOTE: Myelin sheath gives white appearance to white matter; in contrast, gray matter is nonmyelinated.)

   C. Neurilemma--Thin membrane with nuclei called Schwann cells completely covering the nerve fiber; regenerates nerve fibers

VI. Mechanism of regeneration of peripheral nerves (Transparency 5)

(NOTE: Neurons do not multiply as other cells do to replace those destroyed by injury or disease. The nerve fiber can regenerate only if the cell body is intact.)

   A. Part of the fiber separated from the cell body disintegrates

   B. Neurilemma starts to regenerate at the site of injury

   (NOTE: If the cut ends of the neurilemma are not too far apart, they grow together to re-establish the neurilemmar tube.)

   C. Remaining stump of the axon attached to the cell body is able to grow in the repaired tube

   (NOTE: A surgeon may be able to aid in the regeneration process by aligning the cut ends of a nerve and in some cases the gap of injury can be spanned by artificial tubes. The regeneration process is slow, with an approximate rate of 1.5 mm per day.)

VII. Actions of transmission of nerve signals

   A. Neuron sends an impulse to the next neuron across the synapse, between axon and dendrite, when it receives a signal

   B. Two or more neurons conduct impulses from one place to another, in a chain function

INFORMATION SHEET

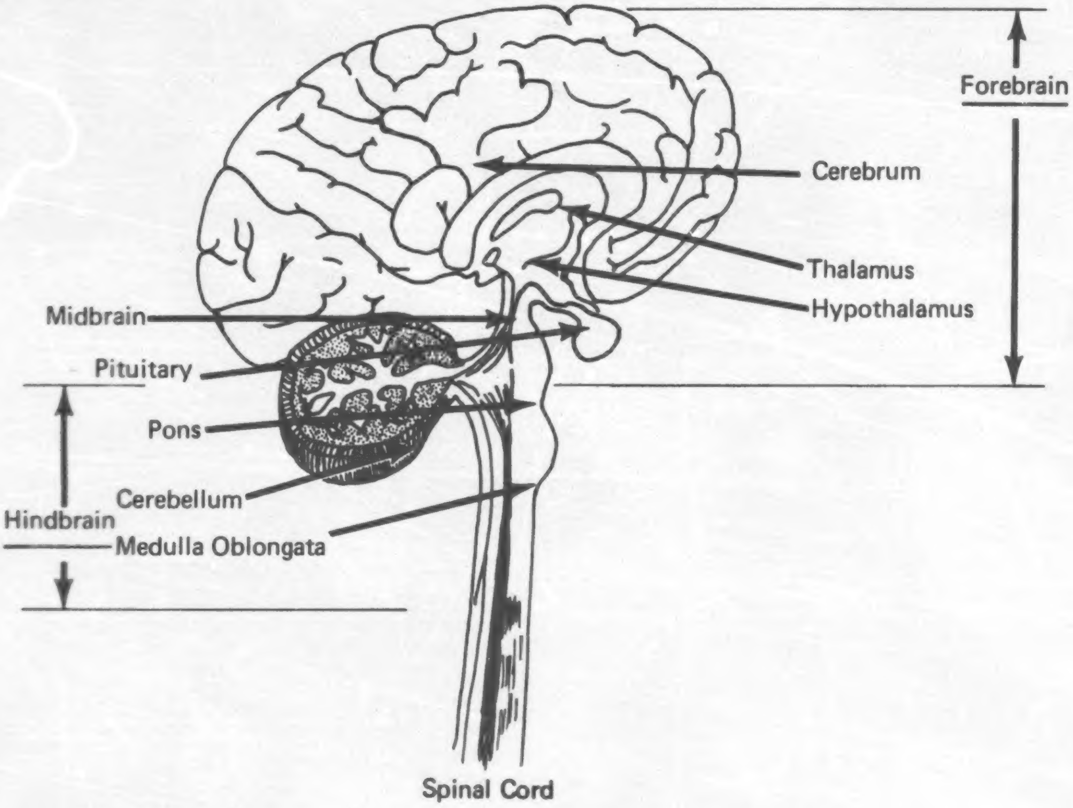
C. Impulses pass only in one direction from receptor dendrite, to cell body, to axon, to dendrite, and so on

(NOTE: When a nerve impulse is blocked, the blocking usually takes place at a synapse.)

Example: Signal transmission

When the hand touches something hot, the receptors start a message over the afferent neurons to the central nervous system; the connecting neurons of the central nervous system interpret the message and determine the course of action; a further impulse is sent out over the efferent neurons to bring about a proper response, in this instance, to remove the hand from the source of heat

VIII. Main sections of the central nervous system


Forebrain
Cerebrum
Thalamus
Hypothalamus
Midbrain
Pituitary
Pons
Cerebellum
Hindbrain
Medulla Oblongata
Spinal Cord

INFORMATION SHEET

IX. Areas of the cerebral cortex (Transparency 6)

A. Motor area--Controls movement of muscles

B. Sensory area--Receives impulses of heat, cold, touch, pain, and pressure from receptors

C. Association area--Controls higher mental functions

(NOTE: More than three-fourths of the cerebral cortex is occupied by association areas.)

Examples: Learning, memory, reasoning, judgment, conscience, thinking, insight, and emotions

X. Parts of the brain (Transparencies 6 and 7)

(NOTE: The left side of the brain controls the right side of the body, and the right side of the brain controls the left side of the body. The top of the brain controls lower portion of body; bottom controls the top of body.)

A. Frontal lobe of cerebrum--Controls voluntary muscles and judgment

B. Parietal lobe of cerebrum--Controls sensory functions, such as pain, touch, and temperature interpretation

C. Temporal lobe of cerebrum--Controls hearing, smell, and taste

D. Occipital lobe of cerebrum--Controls vision

E. Thalamus--Serves as relay center; monitors sensory stimuli

F. Hypothalamus--Controls body temperature, water balance, sleep, appetite, some emotions such as fear and pleasure, and both divisions of the autonomic nervous system

(NOTE: The thalamus and hypothalamus are located between the cerebrum and the midbrain in an area known as the diencephalon, a division of the forebrain.)

G. Midbrain--Serves as a reflex center

H. Pons--Connects the cerebrum and cerebellum

(NOTE: This is the site of fifth, sixth, seventh, and eighth cranial nerves.)

I. Medulla--Controls vital functions, such as breathing, heart rate, blood pressure, swallowing, and coughing

(NOTE: This is the site of ninth, tenth, eleventh, and twelfth cranial nerves.)

INFORMATION SHEET

J. Cerebellum--Maintains balance, equilibrium, coordination, and muscle tone

XI. Functions of the spinal cord

A. Conducts impulses to and from the brain

B. Serves as a reflex center to receive and transmit messages through nerve fibers

XII. Protection of the central nervous system

A. Fragile nervous tissue--Is protected by fluid, membrane, and bones

B. Brain--Is covered by cranial bones

C. Spinal cord--Is surrounded by vertebrae

D. Cranial bones and vertebrae--Are lined with meninges, tough membranes

XIII. Vessels that supply blood to the brain

(NOTE: The brain needs approximately 15 percent of the total output of the heart for normal function. Either too little oxygen or too much carbon dioxide causes dilation of the arteries of the brain, permitting more blood to reach the brain. If the blood supply is halted for six-10 minutes, irreversible changes take place.)

A. Four arteries, two internal carotids, and two vertebral vessels unite to form the Circle of Willis at the base of the brain

B. Circular arrangement of the arteries equalizes the circulation of blood and provides an alternate passageway for blood in case of blockage of one of the arteries

XIV. Formation, purpose, and absorption of cerebrospinal fluid

A. Formation--Fluid is produced constantly by filtration from the blood in the capillaries of the brain and in the ventricles

B. Purpose--Fluid circulates around the brain and spinal cord, maintaining an even pressure and acting as a cushion or shock absorber

C. Absorption--Fluid is continually absorbed by the blood vessels to maintain constant volume, pressure, and composition

INFORMATION SHEET

XV. Names and specific functions of the cranial nerves (Transparency 8; Job Sheet #2)

NAME	NUMBER	FUNCTION
Olfactory	I	Sense of smell
Optic	II	Sense of sight
Oculomotor	III	Controls part of the eyeball muscles
Trochlear	IV	Controls one eyeball muscle
Trigeminal	V	Three branches supply cornea and conjunctiva; upper portion of face, ear, lower lip, teeth, and gums; and muscles for chewing
Abducens	VI	Controls lateral eye movement
Facial	VII	Supplies facial muscles, middle ear, taste
Auditory	VIII	Sense of hearing and balance
Glossopharyngeal	IX	Taste, swallowing
Vagus	X	Swallowing, hunger, speech muscles, breathing, heart rate peristalsis, control of glands in stomach and pancreas
Spinal accessory	XI	Controls muscles of neck and upper back
Hypoglossal	XII	Controls tongue muscles

XVI. Spinal nerves and the number of pairs in each (Transparency 9)

(NOTE: There are 31 pairs of spinal nerves, named according to the segment of spinal cord to which they are attached. Disease or injury that damages a spinal nerve will cause loss of feeling and voluntary movement to the area served by that nerve. A dermatome is an area of skin supplied by a specific spinal nerve.)

	Name	Number of pairs
A.	Cervical	Eight
B.	Thoracic	Twelve

	Name	**Number of pairs**
C.	Lumbar	Five
D.	Sacral	Five
E.	Coccygeal	One

XVII. Reflex arc (Transparency 10)

A. Is the simplest type of nerve response which is unconscious and involuntary

B. Involves an affector, an afferent neuron, a connecting neuron in the spinal cord, an efferent neuron, and an effector

Examples: Knee jerk or patellar, abdominal, Achilles, biceps, triceps, and plantar reflexes; blinking of eye when something touches it; secretion of saliva at sight or smell of food

(NOTE: Reflex tests are used diagnostically to determine defects in the central nervous system.)

XVIII. Divisions of the autonomic nervous system

A. Sympathetic thoracolumbar--System increases certain automatic functions and can be thought of as an emergency nervous system

B. Parasympathetic craniosacral--System counteracts the effects of the sympathetic thoracolumbar system and usually dominates most automatic functions

XIX. Terms associated with the special senses

A. Accommodation--Adjustment by the lens to make a sharp, clear image on the retina

B. Auditory--Pertaining to the sense of hearing

C. Cerumen--Waxlike, soft, brown secretion found in the external ear canal; lubricates and protects external canal and tympanum/tympanic membrane

D. Equilibrium--Normal orientation of the body in respect to its environment

E. Extrinsic--Outside a part

F. Incus--Anvil-shaped bone of the middle ear

G. Intrinsic--Within a part

H. Malleus--Hammer-shaped bone of the middle ear

I. Olfactory--Pertaining to sense of smell

INFORMATION SHEET

J. Ophthalmologist--Physician who specializes in the treatment of eye disorders

(NOTE: The old term for ophthalmologist is oculist.)

K. Ophthalmology--Study of the eye and its diseases

L. Orbit--Cavity in the bone in which the eye is located

(NOTE: The orbit is lined with a layer of fatty tissue and acts as protection for the eye.)

M. Otology--Study of the ear and its diseases

(NOTE: *Oto* refers to the ear.)

N. Sense--General faculty through which conditions outside or inside the body are perceived

O. Stapes--Stirrup-shaped bone of middle ear

P. Taste buds--Receptors of taste found in the tongue

Q. Canthus--Angle at either end of the slit between the eyelids

R. Optometrist--Person trained and licensed to examine the eyes for vision problems and to prescribe and adapt lenses

S. Optician--One who makes lenses and fits glasses

XX. Basic senses

A. Special senses

1. Vision
2. Hearing
3. Taste
4. Smell

B. Hunger and thirst

C. Touch, pressure, temperature, and pain

D. Position and balance

XXI. Functions of the eye and accessory structures (Transparencies 11, 12, 13, and 14; Job Sheets #3, #6, #7, and #8)

A. Conjunctiva--Covers the front of the eyeball; lines the eyelid; aids in keeping the eye moist

INFORMATION SHEET

B. Choroid--Middle vascular layer on lateral and posterior eyeball; supplies oxygen and nutrients

C. Iris--Circular muscle; regulates amount of light entering pupil; the pigmented or colored part of the eye

D. Ciliary muscle--Controls shape of lens to make sharp, clear image

E. Sclera--Outer white layer of firm, connective tissue covering the eyeball

F. Cornea--Clear, transparent part of the sclera on the front of eyeball; allows light through

G. Lens--Circular jelly-like suspension; focuses images on retina

H. Suspensory or ciliary ligament--Holds lens in place

I. Anterior chamber--Space in front of lens between cornea and iris filled with aqueous humor

J. Posterior chamber--Space between iris and lens

K. Vitreous humor--Jelly-like substance filling the eyeball posterior to the lens; maintains shape of eyeball

L. Retina--Inner layer of nerve tissue partially made up of rods and cones, special light sensitive cells; receives visual images

M. Optic nerve--Carries visual impulses from retina to brain

N. Lacrimal gland--Lies superior and lateral to eyeball; secretes tears which moisten and cleanse eye and destroy some bacteria

O. Lacrimal ducts--In upper and lower eyelids at inner edge; carry tears from eye to nasal cavity

P. Eyelid muscles--Levators which open and close eyelids

Q. Oculomotor nerve--Controls part of eye muscles

R. Ophthalmic nerve--Carries impulses of pain, touch, and temperature from eye and surrounding parts

XXII. Structures of the ear (Transparency 15; Job Sheets #4, #5, and #8)

A. Outer ear

1. Pinna or auricle

(NOTE: The pinna catches air vibrations or sounds.)

INFORMATION SHEET

2. External auditory canal

   (NOTE: The external auditory canal guides air vibrations to the tympanic membrane.)

3. Tympanic membrane (eardrum)

   (NOTE: The tympanic membrane protects the middle ear and vibrates when sounds strike it; it is also known as *eardrum* or *tympanum*.)

B. Middle ear

1. Malleus

2. Incus

3. Stapes

   (NOTE: The malleus, incus, and stapes comprise the ossicles. They amplify sound waves received from the tympanum and transmit waves to inner ear.)

4. Oval window

   (NOTE: The oval window permits passage of sound waves from ossicles to inner ear.)

5. Round window

   (NOTE: The round window separates middle and inner ear.)

6. Eustachian tube

   (NOTE: The eustachian tubes regulate pressure in middle ear to equal pressure outside tympanum.)

C. Inner ear

1. Cochlea

   (NOTE: The cochlea contains the corti, the organ for hearing.)

2. Vestibule

   (NOTE: The vestibule controls the sense of position.)

3. Semicircular canals

   (NOTE: The semicircular canals control equilibrium.)

INFORMATION SHEET

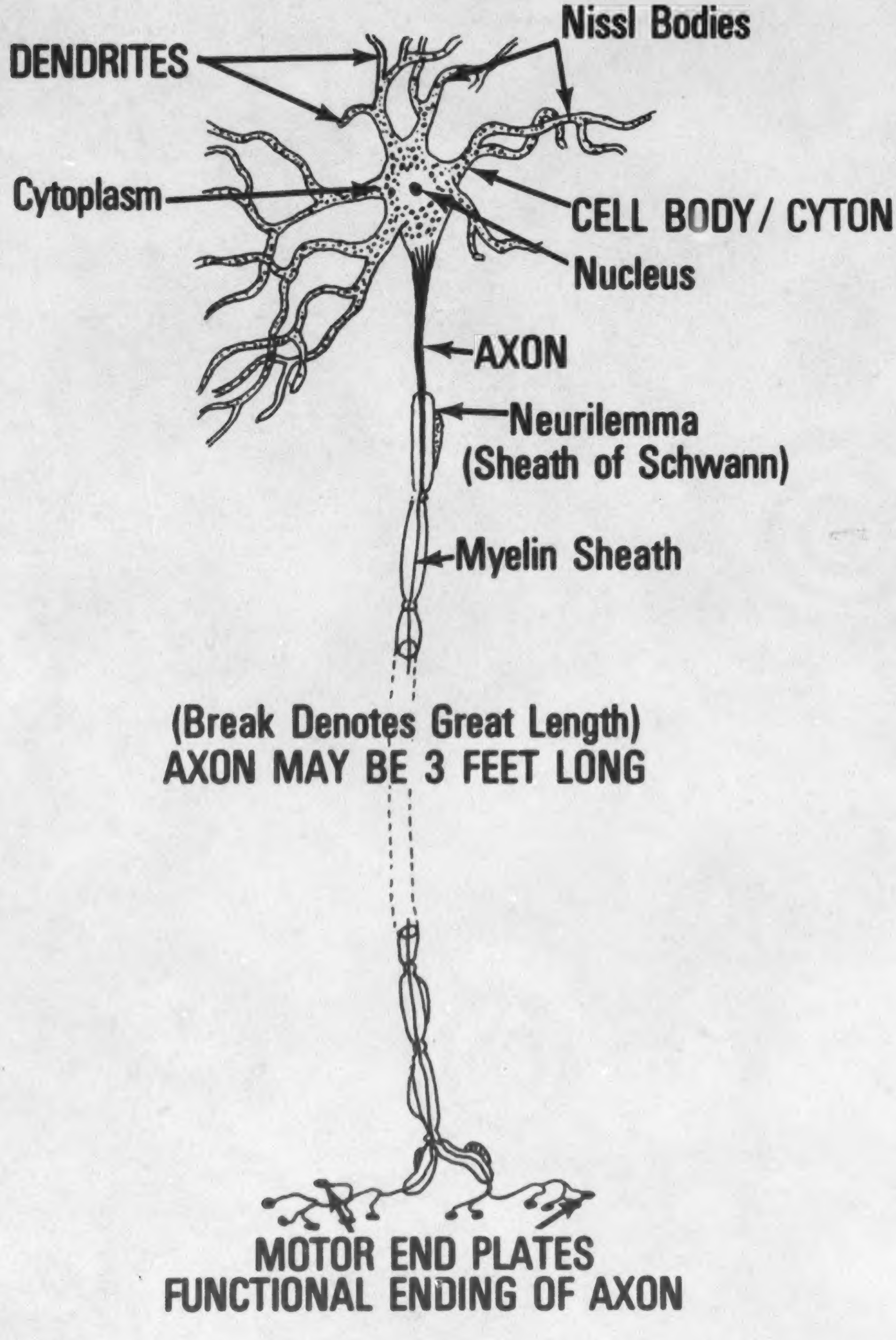
XXIII. Sense of taste (Transparency 16; Assignment Sheet #1)

- A. Taste buds relay impulses to two different nerves which carry the impulses to the brain
- B. Taste buds are stimulated only if substance to be tasted is in solution
- C. Different kinds of taste buds have separate locations on the tongue
    1. Sweet taste is located near the tip of the tongue
    2. Sour taste is located at the sides of the tongue
    3. Salty taste is located near the tip of the tongue
    4. Bitter taste is located at the back of the tongue

XXIV. Sense of smell (Transparency 17; Job Sheet #8)

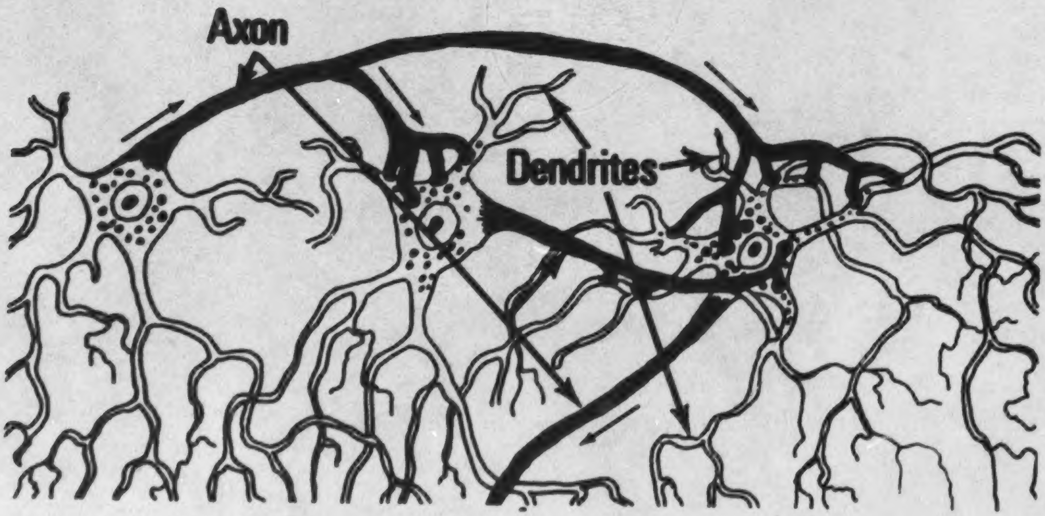
- A. Sense of smell is closely related to the sense of taste
- B. Receptors are located in the olfactory epithelium in the upper part of the nasal cavity
- C. Olfactory nerve carries smell impulses to the brain
- D. Olfactory nerves tire quickly and become less sensitive after detecting the same odor for a period of time

A Typical Neuron

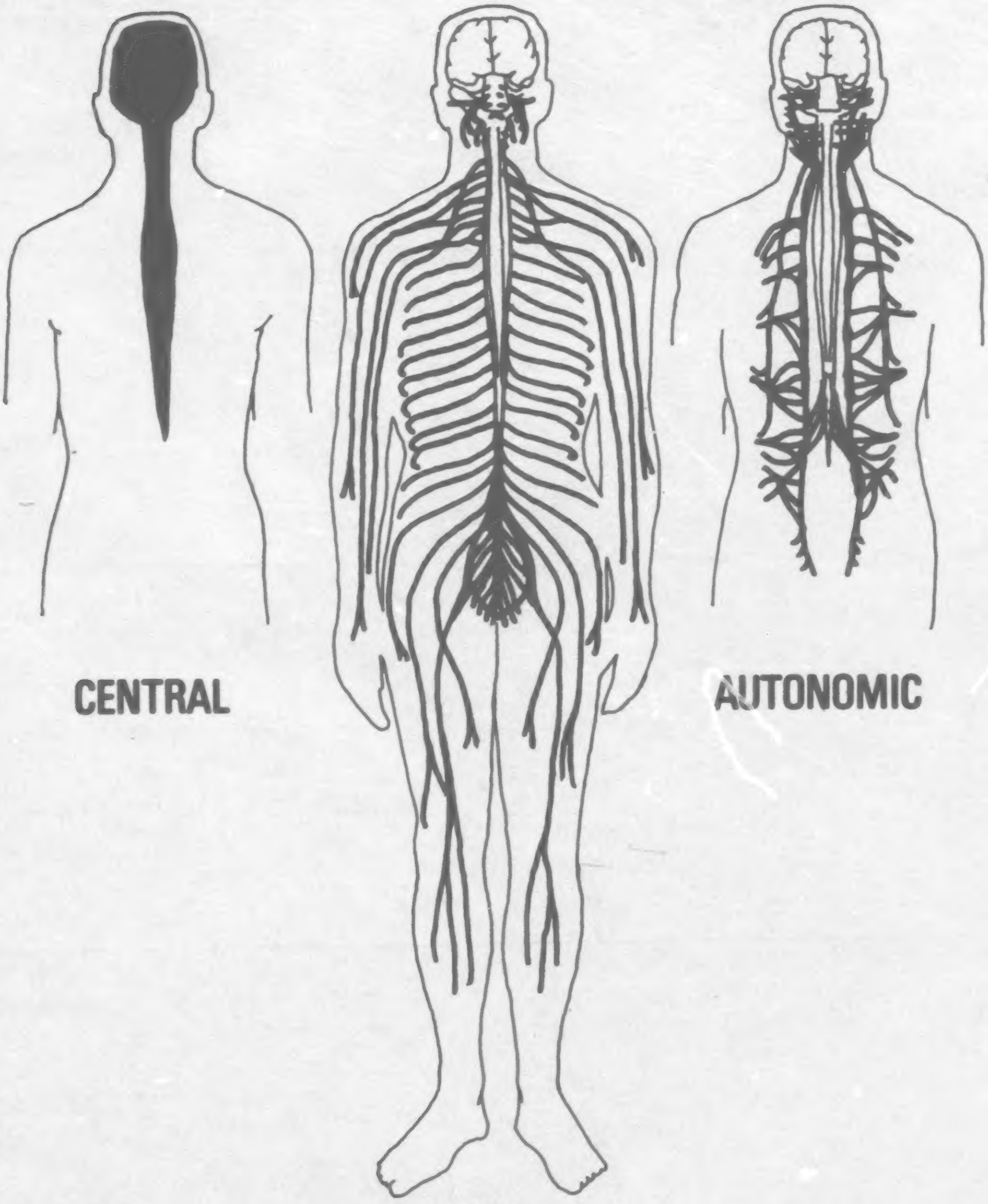

DENDRITES
Nissl Bodies
Cytoplasm
CELL BODY/ CYTON
Nucleus
AXON
Neurilemma
(Sheath of Schwann)
Myelin Sheath
(Break Denotes Great Length)
AXON MAY BE 3 FEET LONG
MOTOR END PLATES
FUNCTIONAL ENDING OF AXON

A Synapse

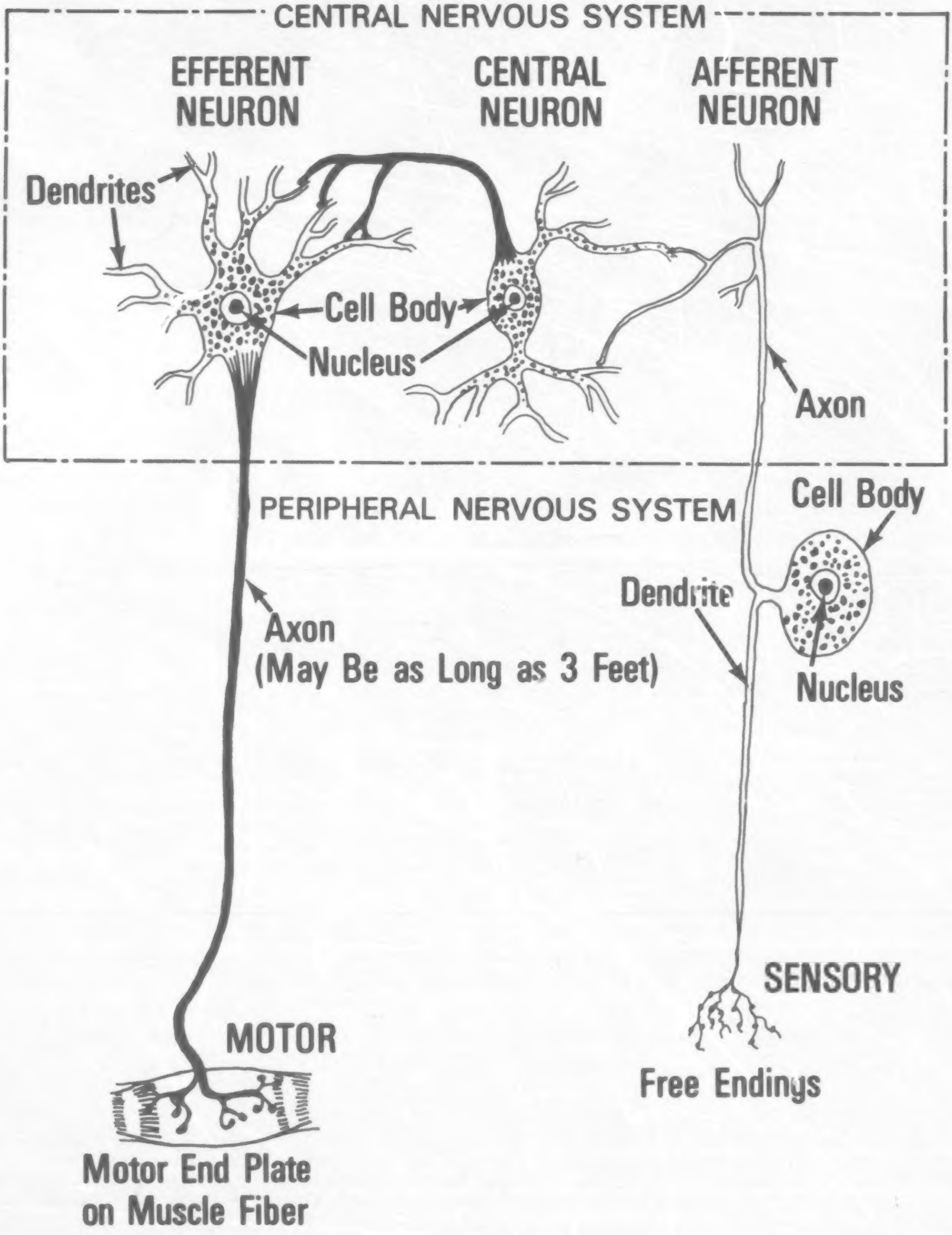
SYNAPSE: Ends of Axons Contact Dendrites or Cell Bodies of Other Cells for Transmission of Impulses


Axon
Dendrites

Human Nervous System

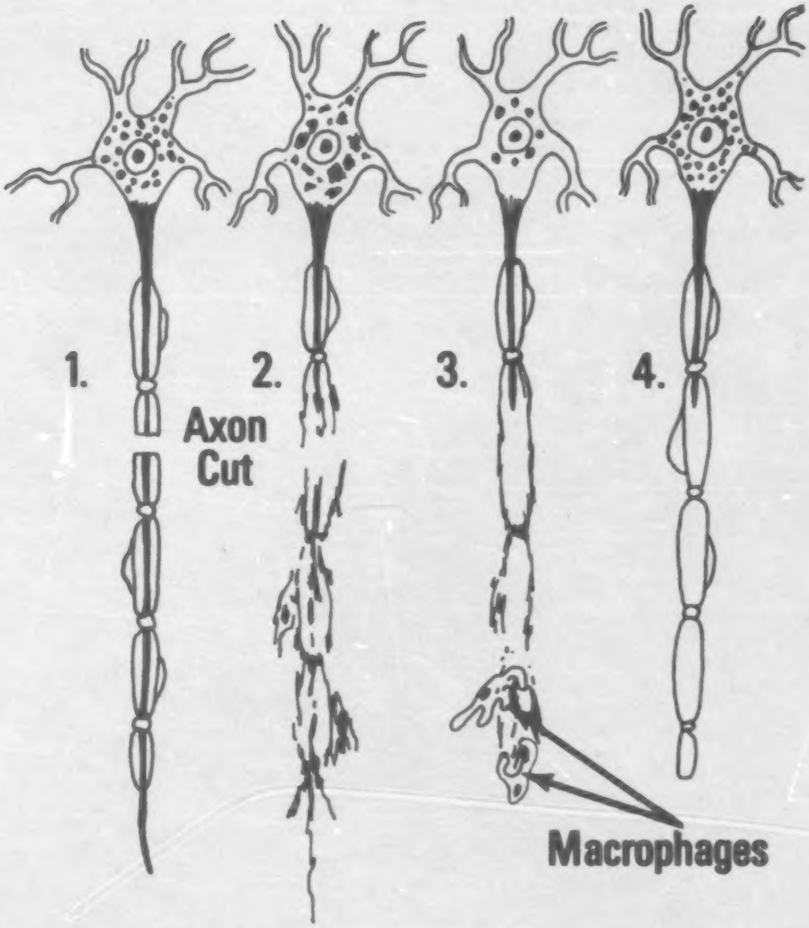

CENTRAL
AUTONOMIC
PERIPHERAL

Sensory, Central, and Motor Neurons

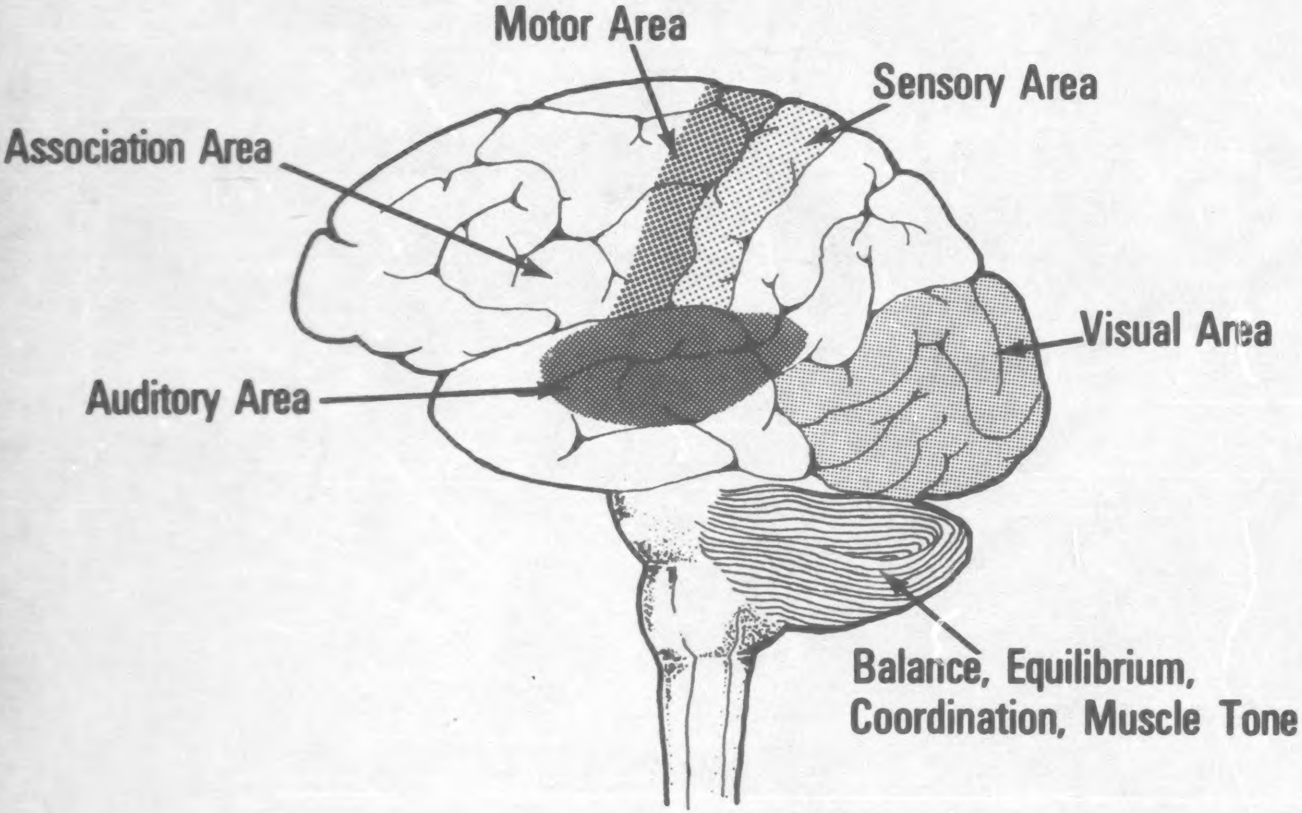

CENTRAL NERVOUS SYSTEM
EFFERENT NEURON
CENTRAL NEURON
AFFERENT NEURON
Dendrites
Cell Body
Nucleus
Axon
PERIPHERAL NERVOUS SYSTEM
Cell Body
Dendrite
Nucleus
Axon
(May Be as Long as 3 Feet)
SENSORY
Free Endings
MOTOR
Motor End Plate on Muscle Fiber

1709

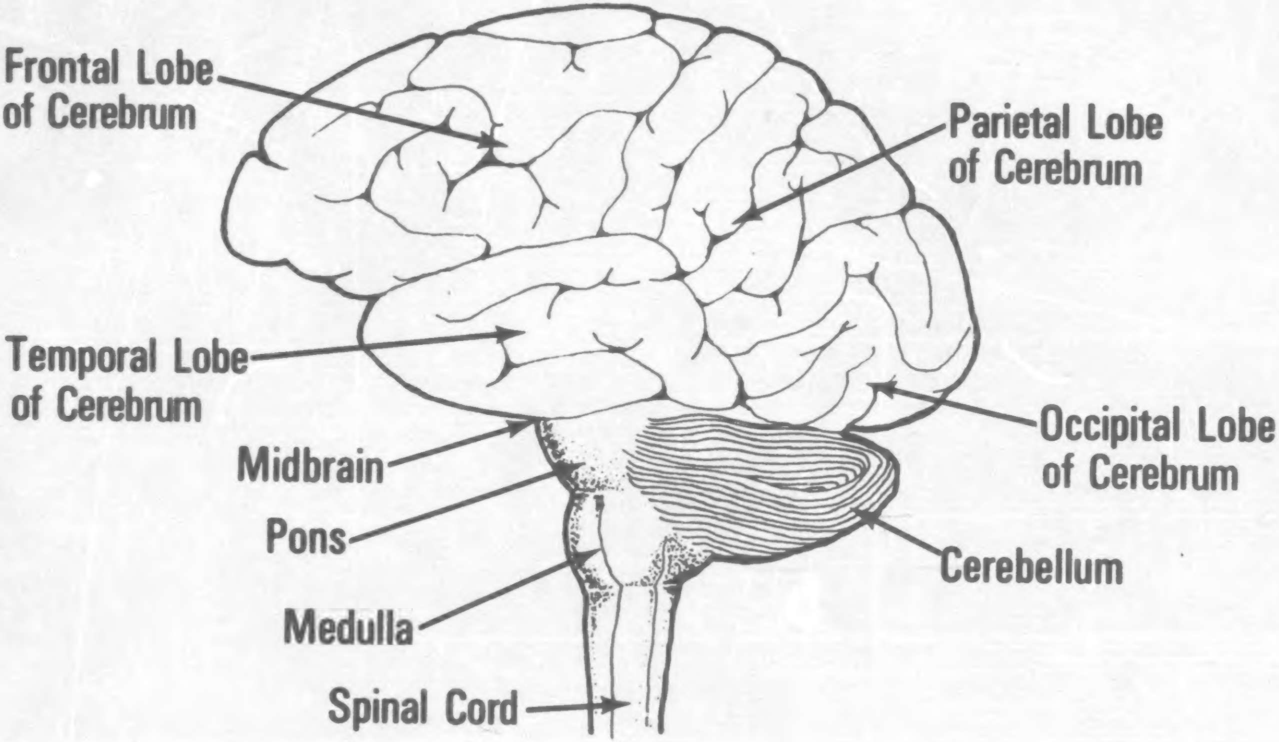
Regeneration of a Nerve Fiber


1.
2.
3.
4.
Axon
Cut
Macrophages

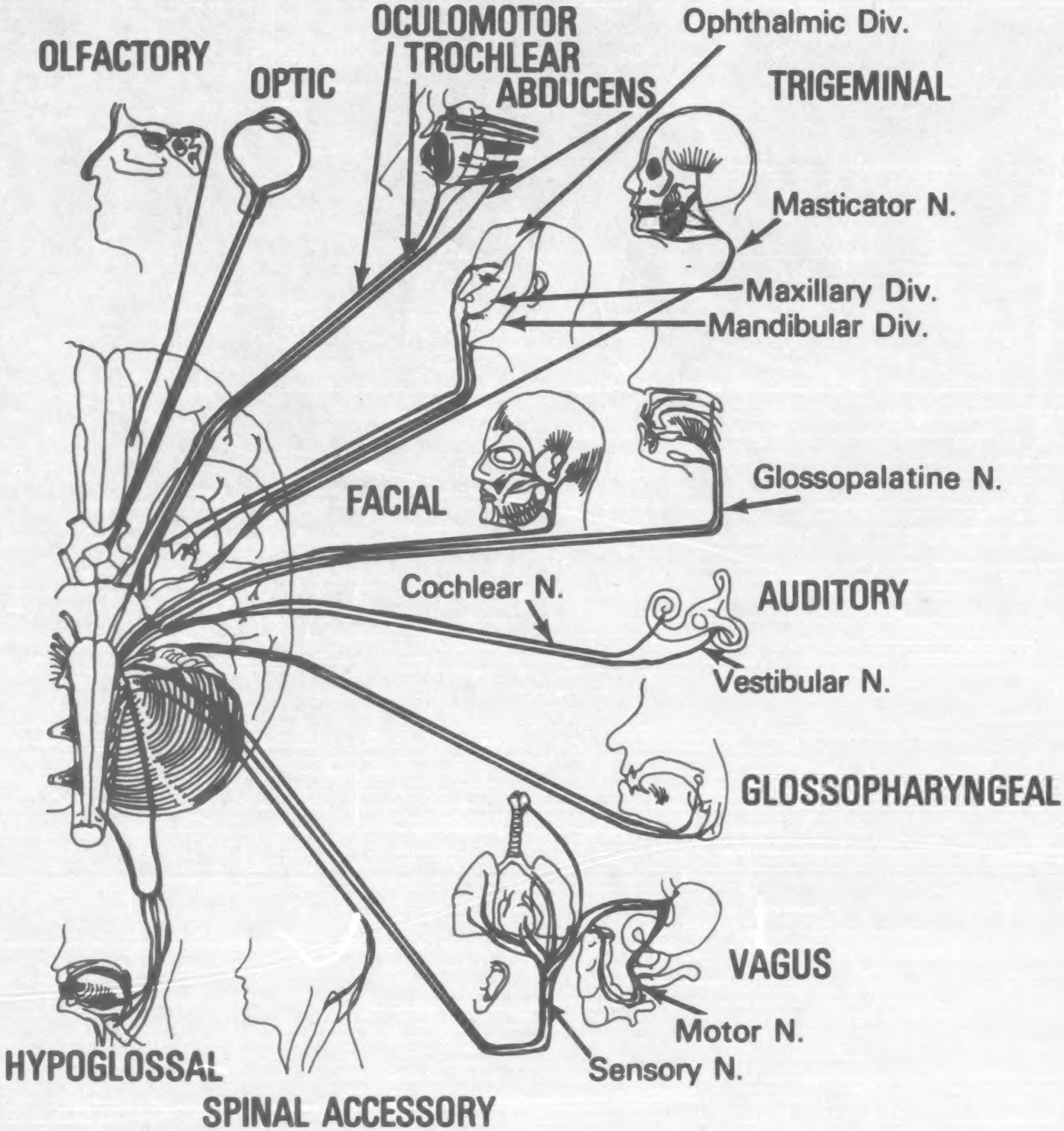
Functional Areas of the Brain


Motor Area
Sensory Area
Association Area
Visual Area
Auditory Area
Balance, Equilibrium,
Coordination, Muscle Tone

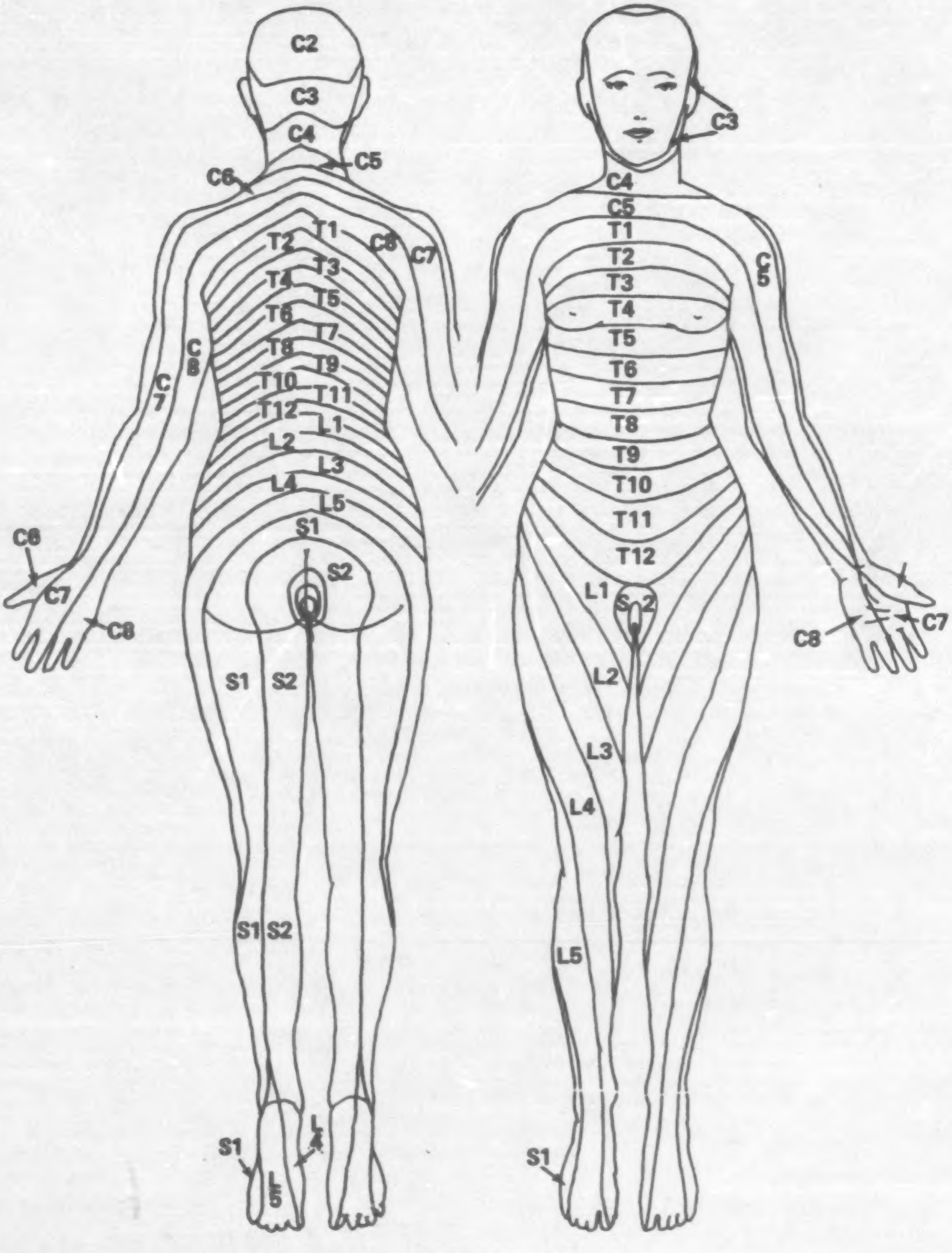
External Surface of the Brain


Frontal Lobe of Cerebrum
Parietal Lobe of Cerebrum
Temporal Lobe of Cerebrum
Midbrain
Occipital Lobe of Cerebrum
Pons
Cerebellum
Medulla
Spinal Cord

The Cranial Nerves


OLFACTORY
OPTIC
OCULOMOTOR
TROCHLEAR
ABDUCENS
Ophthalmic Div.
TRIGEMINAL
Masticator N.
Maxillary Div.
Mandibular Div.
FACIAL
Glossopalatine N.
Cochlear N.
AUDITORY
Vestibular N.
GLOSSOPHARYNGEAL
VAGUS
Motor N.
Sensory N.
HYPOGLOSSAL
SPINAL ACCESSORY

The Dermatomes


C2
C3
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T12
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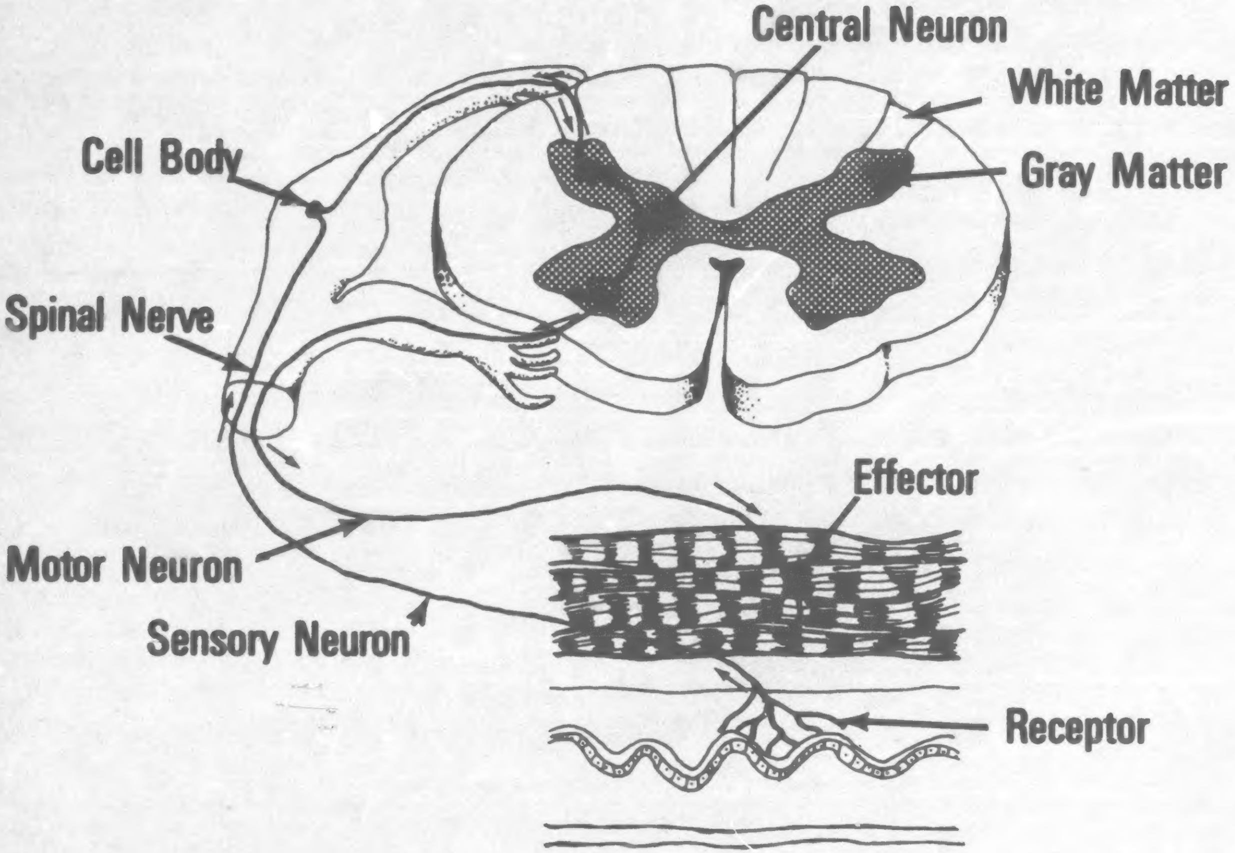
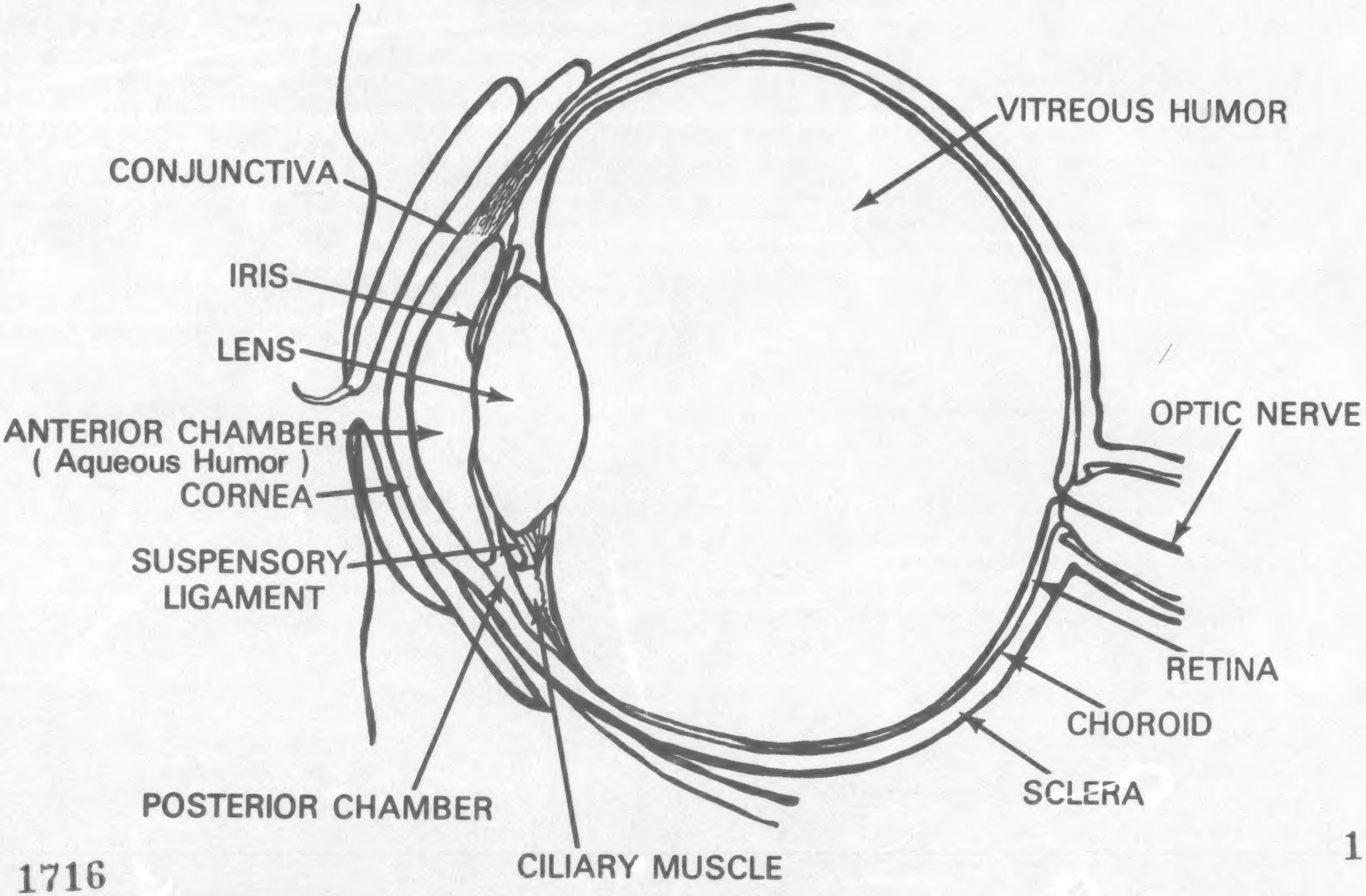
S2
L2
L3
L4
L5
C8
C7
S1

1714

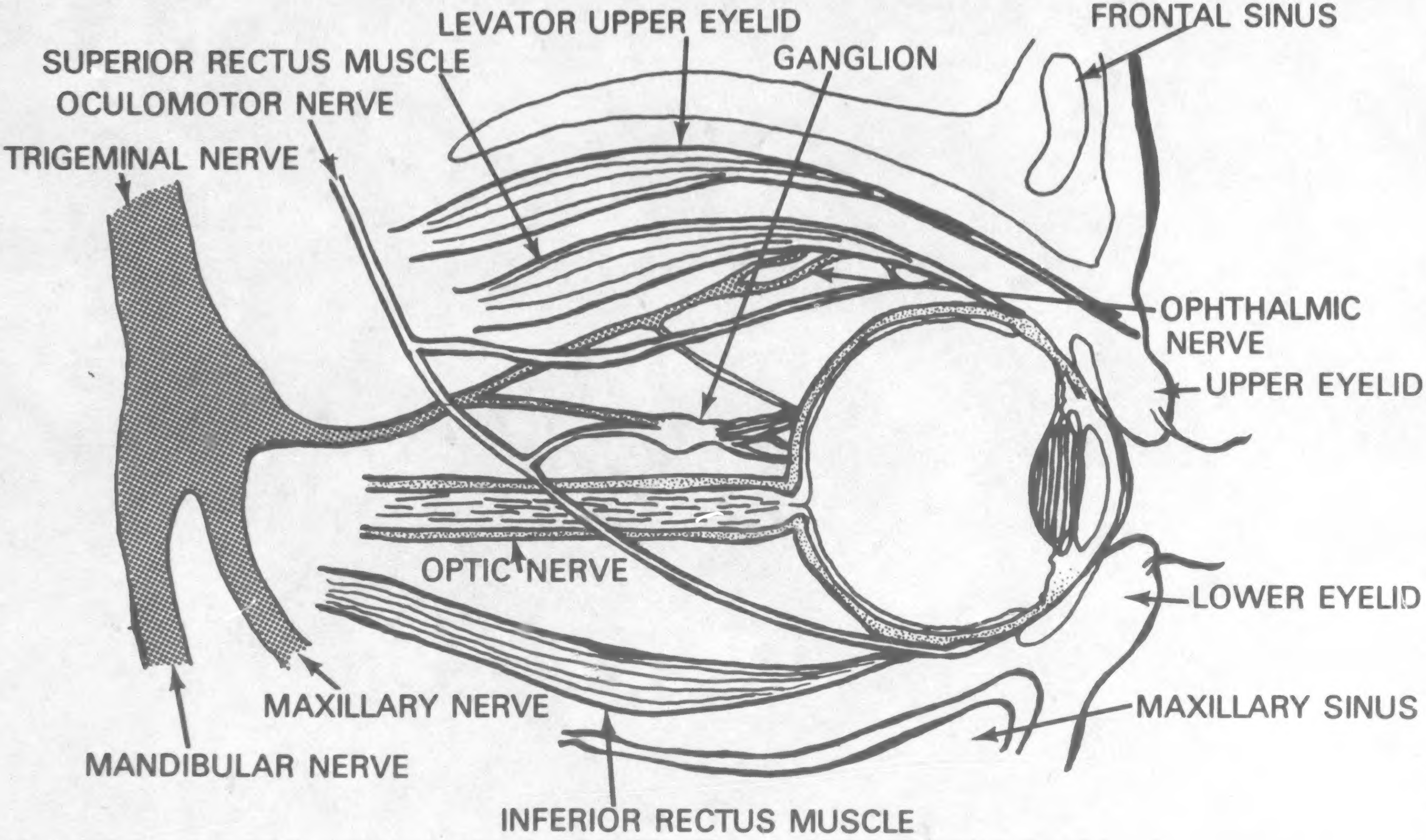
Reflex Arc


Central Neuron
White Matter
Cell Body
Gray Matter
Spinal Nerve
Effector
Motor Neuron
Sensory Neuron
Receptor

The Eye

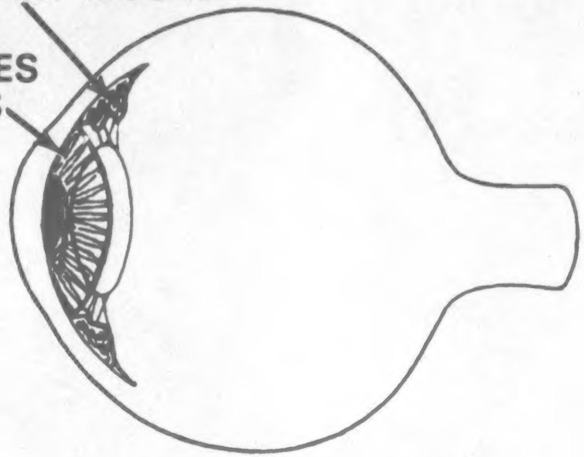

VITREOUS HUMOR
CONJUNCTIVA
IRIS
LENS
ANTERIOR CHAMBER
(Aqueous Humor)
CORNEA
OPTIC NERVE
SUSPENSORY LIGAMENT
RETINA
CHOROID
SCLERA
POSTERIOR CHAMBER
CILIARY MUSCLE

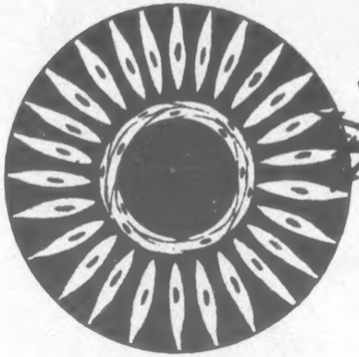
The Eye and Accessory Structures


LEVATOR UPPER EYELID
FRONTAL SINUS
SUPERIOR RECTUS MUSCLE
GANGLION
OCULOMOTOR NERVE
TRIGEMINAL NERVE
OPHTHALMIC NERVE
UPPER EYELID
OPTIC NERVE
LOWER EYELID
MAXILLARY NERVE
MAXILLARY SINUS
MANDIBULAR NERVE
INFERIOR RECTUS MUSCLE

Intrinsic Muscles of the Eyeball

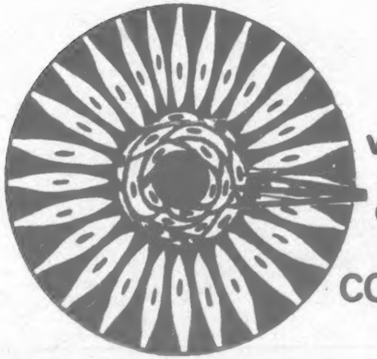
INTRINSIC EYE MUSCLES


CILIARY MUSCLE
MUSCLES OF IRIS



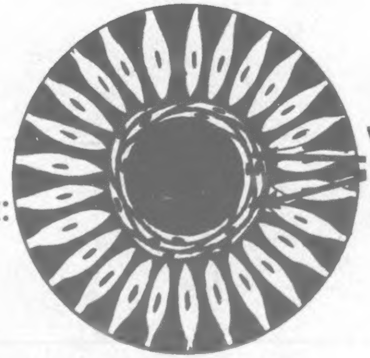
when radial muscle fibers of iris contract:

PUPIL IS DILATED



when circular muscle fibers of iris contract:

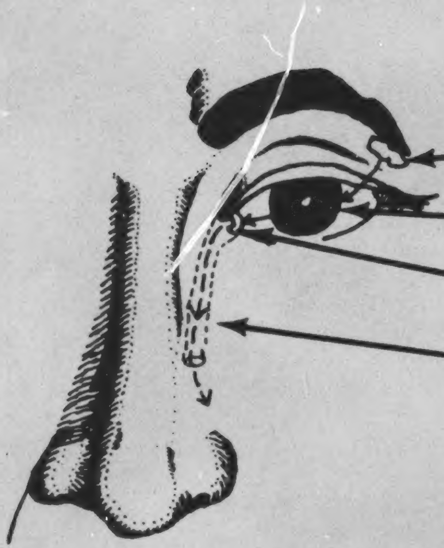
PUPIL IS CONSTRICTED



when circular muscle fibers of iris relax:

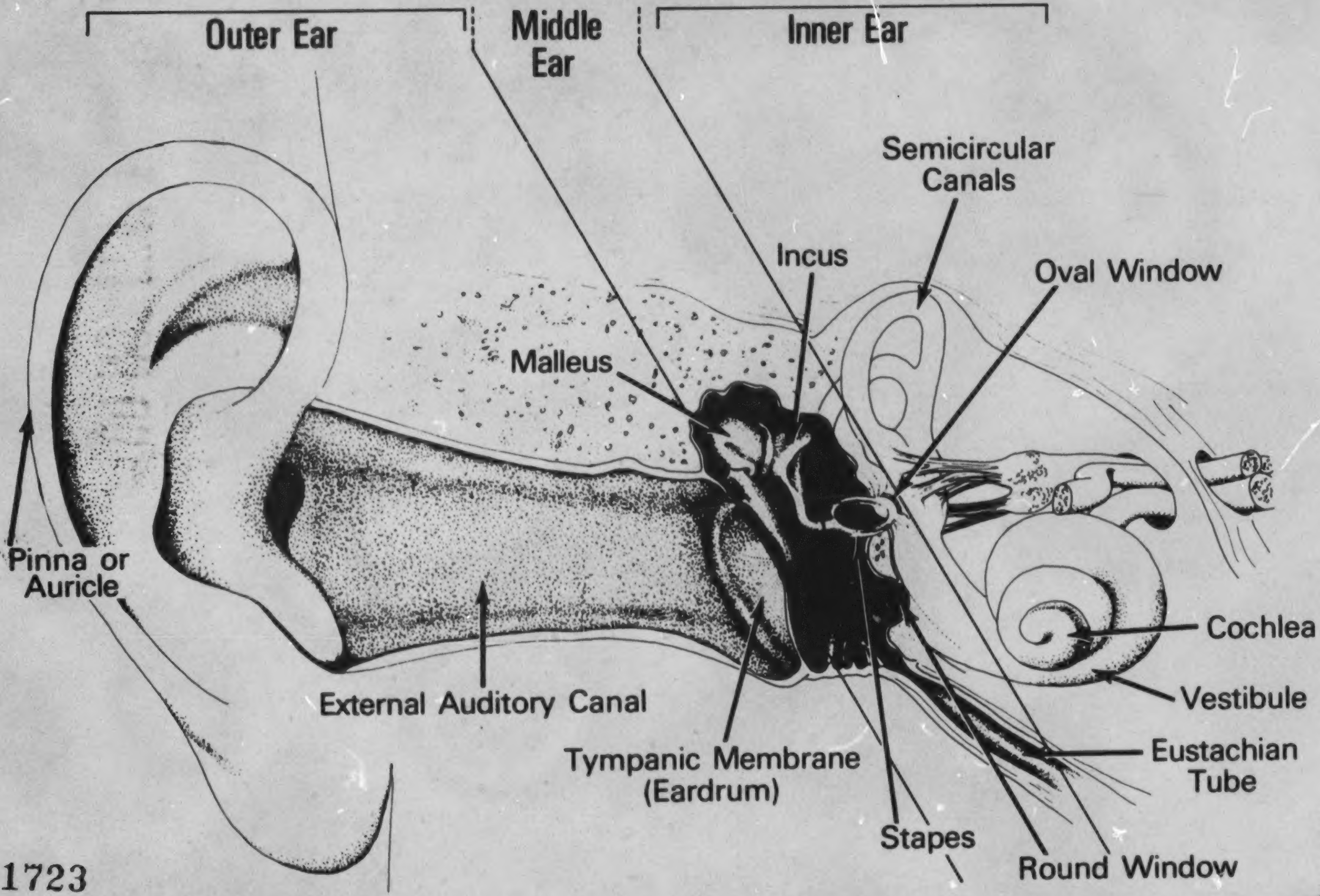
PUPIL IS DILATED

Lacrimal Gland

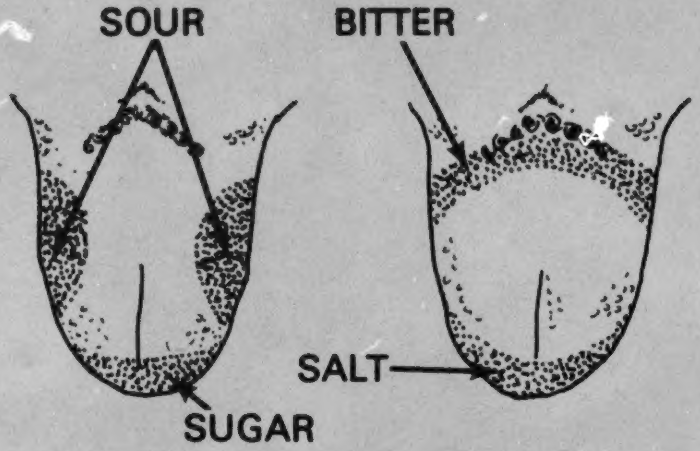


1. LACRIMAL GLAND RELEASES TEARS
2. TEARS WASH OVER EYEBALL
3. TEARS LEAVE EYE VIA LACRIMAL DUCT
4. WASH DOWN INTO NASOLACRIMAL DUCT

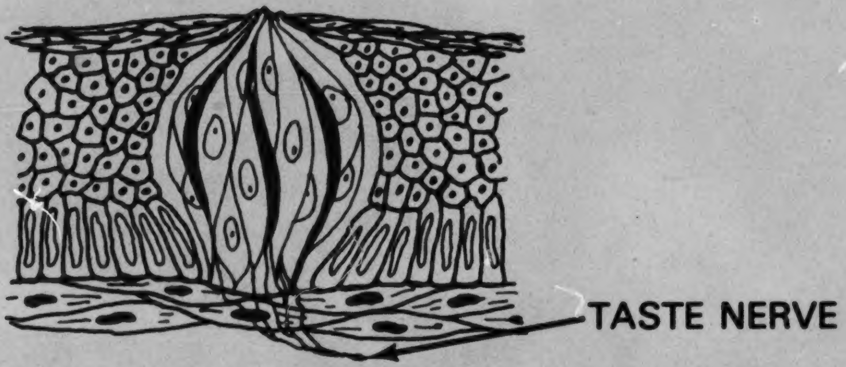
The Ear


Outer Ear
Middle Ear
Inner Ear
Semicircular Canals
Incus
Oval Window
Malleus
Pinna or Auricle
Cochlea
External Auditory Canal
Vestibule
Tympanic Membrane (Eardrum)
Eustachian Tube
Stapes
Round Window

The Tongue and Taste


SOUR
BITTER
SALT
SUGAR

Location on the Tongue of the Four Basic Taste Sensations


TASTE NERVE

Taste Buds are Special Cells on the Tongue containing Nerve Endings Sensitive to Taste

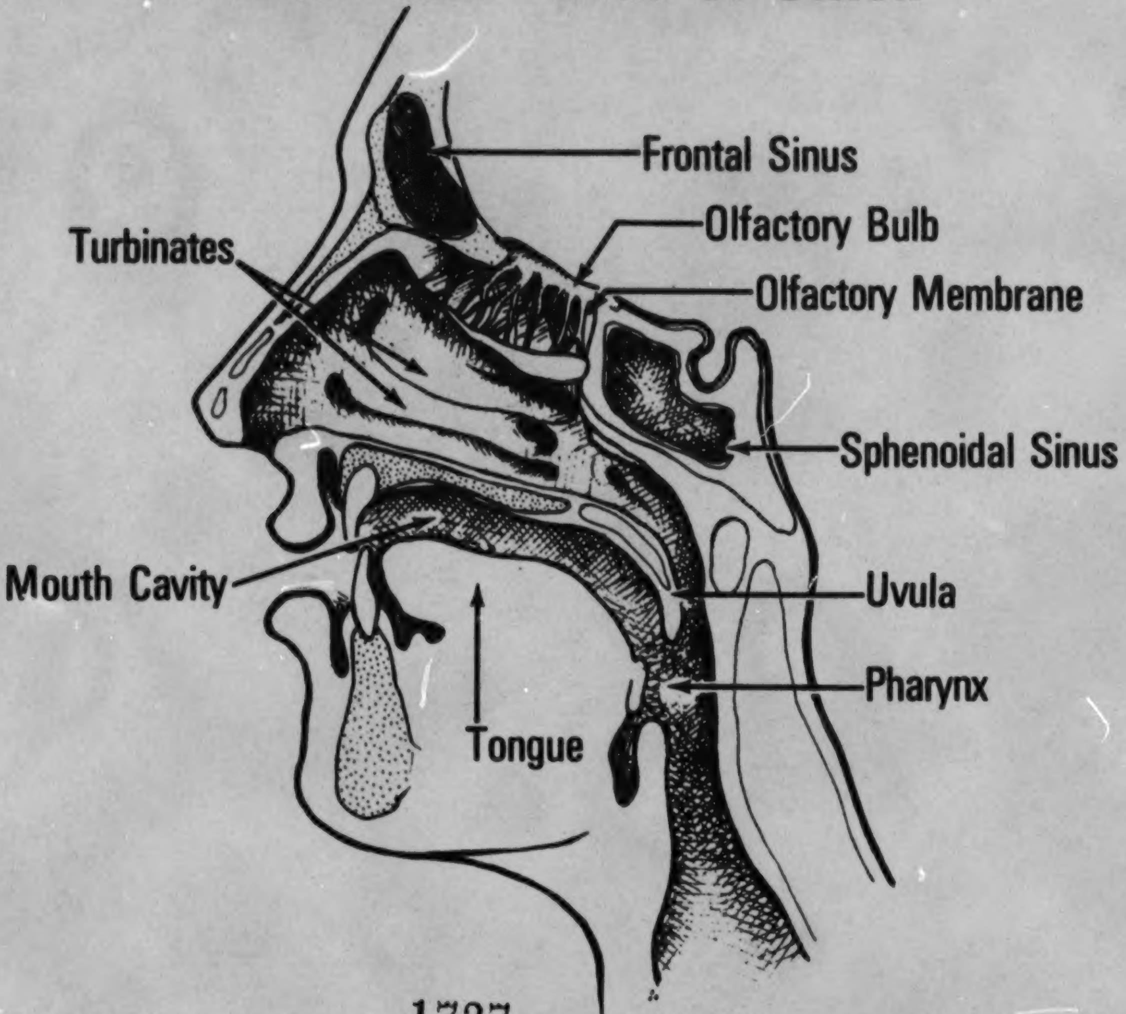
TM 16

PN I - 1503-C

1725

1726

The Nose and Sense of Smell


Frontal Sinus
Olfactory Bulb
Turbinates
Olfactory Membrane
Sphenoidal Sinus
Mouth Cavity
Uvula
Pharynx
Tongue

1727

NERVOUS SYSTEM AND SPECIAL SENSES
UNIT XIII

ASSIGNMENT SHEET #1--DESCRIBE REACTION OF TASTE BUDS

NAME ____________________ SCORE ____________

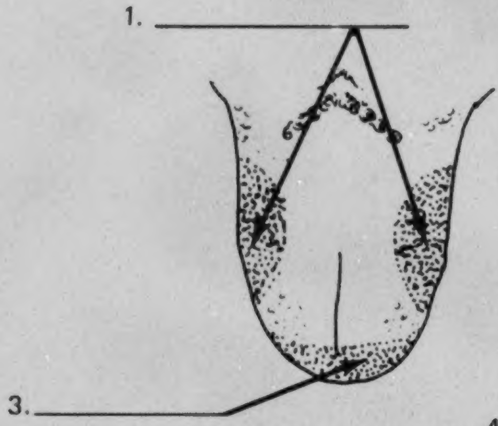
Taste is an important factor in good health and nutrition. Most people enjoy eating foods that taste good and avoid bad-tasting substances.

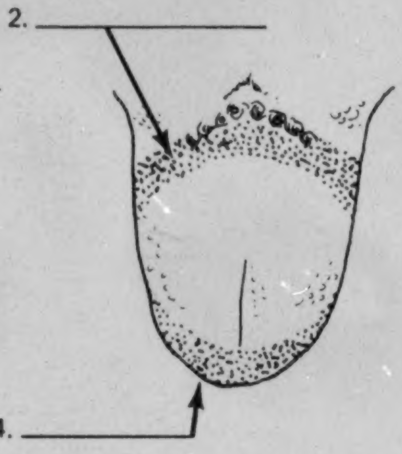
Using the knowledge you have of the taste buds and their areas, choose a partner to help you test your taste buds.

After blindfolding your partner, choose different substances to give as samples. Record below your partner's reactions to the different tastes.

Offer sour, sweet, salty, bland, and bitter substances to taste. Try each substance on the different areas of the tongue and the taste bud areas.

On the drawing below, label where your partner reacted to each substance and hand in to instructor for evaluation.



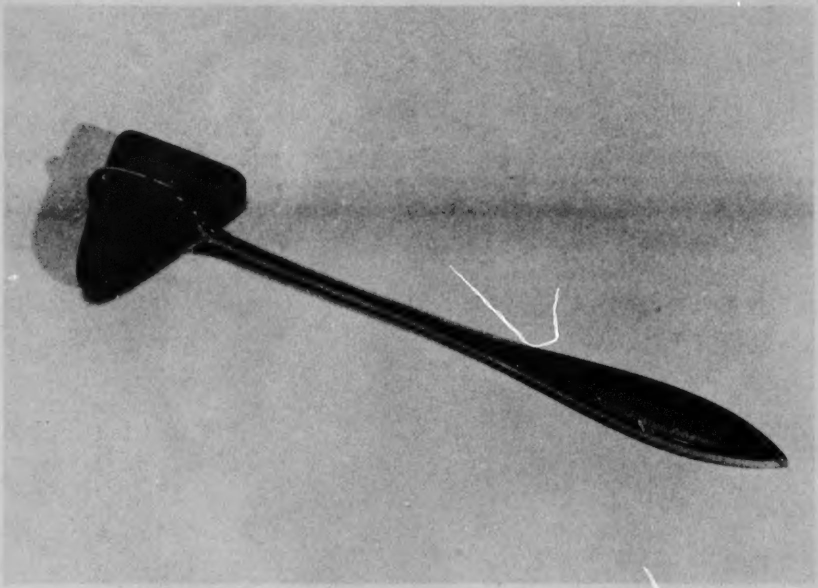


NERVOUS SYSTEM AND SPECIAL SENSES
UNIT XIII

JOB SHEET #1--TEST REFLEXES

I. Equipment--Percussion hammer (Figure 1)

FIGURE 1



II. Procedure

A. Plantar reflex--Stroke the outer side of the sole of the foot with a blunt instrument from heel to toe

(NOTE: The normal reaction should be the flexion of the great toe. The abnormal reaction would be extension of the great toe with a fanning spread of other toes. This extensor reflex is called the Babinski reflex.)

B. Ankle jerk--Tap the Achilles tendon with the flat side of the percussion hammer

(NOTE: The normal reaction should be extension followed by flexion of the ankle. The abnormal reaction would be absent or exaggerated action.)

C. Knee jerk or patellar reflex--Tap knee just above or below patella

(NOTE: The normal reaction should be extension of the lower leg. The abnormal reaction would be absent or exaggerated action.)

JOB SHEET #1

III. Checklist for testing reflexes

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ____________________ ____________________ ____________________		
B. Tested the plantar reflex by stroking the outer side of the sole of the foot with a blunt instrument from heel to toe	☐	☐
Comments: ____________________ ____________________ ____________________		
C. Tested the ankle jerk by tapping the Achilles tendon with the flat side of the percussion hammer	☐	☐
Comments: ____________________ ____________________ ____________________		
D. Tested the knee jerk or patellar reflex by tapping the knee just above or below patella	☐	☐
Comments: ____________________ ____________________ ____________________		

NERVOUS SYSTEM AND SPECIAL SENSES
UNIT XIII

JOB SHEET #2--TEST CRANIAL NERVES

I. Equipment and materials

   A. Substance for testing sense of smell

   B. Snellen chart or printed page with varying sizes of letters

   C. Pin or other sharp instrument

   D. Warm and cold objects, such as a small metal object that can be warmed or cooled

   E. Items to taste--Salt, sugar, and something bitter such as quinine

II. Procedure for testing specific nerves

   A. Olfactory nerve--Test for smell by closing each side of the nose with finger while testing the other side

   B. Optic nerve--Test using eye chart or by reading a printed page of varying size of printed letters

   C. Oculomotor nerve--Test by raising upper eyelid and by having person turn eyes from side to side without turning head

   (NOTE: Damage to third nerve also may cause blurred or double vision.)

   D. Trochlear nerve--Test by turning eyes up and then turning them from side to side without moving head

   E. Trigeminal nerve

      1. Test motor function by asking the person to clench teeth

      2. Test sensory function by checking face for reaction to pain and temperature

      (NOTE: Injury to one part of the fifth nerve may cause loss of sensation in the cornea and conjunctiva which can be tested only with special equipment.)

   F. Abducens nerve--Have person turn eyes from side to side without moving head

   (NOTE: There are six muscles which control eye movements. They perform as prime mover and antagonist, that is, when one contracts, its opposite relaxes.)

JOB SHEET #2

G. Facial nerve

1. Test motor function by having person wrinkle forehead, frown, whistle, and close eyelids tightly

2. Test sensory function by having patient taste sugar, salt, and quinine or some other bitter substance

H. Auditory nerve

1. Test hearing function by observing the person's ability to hear a whispered voice

   a. Have person stand 15 feet from examiner

   b. Have person cover ear closest to examiner with hand to see if examiner's whisper can be heard with the uncovered ear; repeat with other ear

2. Test equilibrium or balance function by using the past-pointing test

   a. Ask the person to raise arms straight to the side

   b. Have person touch index fingers together, first with eyes open, and then with eyes closed

   (NOTE: Normally, the person should be able to touch the fingers together as well with eyes closed as open.)

I. Glossopharyngeal nerve

1. Test taste on posterior one-third of tongue

2. Test ability to swallow

J. Accessory nerve

1. Test trapezius muscle by having person raise shoulders against resistance by pressure from the examiner's hands

2. Test sternocleidomastoid muscle by having person turn head to right and to left against resistance of examiner's hands

K. Hypoglossal nerve--Test by having person protrude tongue

(NOTE: Normally, tongue will protrude in the midline.)

JOB SHEET #2

III. Checklist for testing cranial nerves

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
B. Tested the olfactory nerve by closing each side of the nose with finger while testing the other side	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
C. Tested the optic nerve by using eye chart or by reading a printed page of varying size of printed letters	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
D. Tested the oculomotor nerve by raising upper eyelid and by having person turn eyes from side to side without turning head	☐	☐

Comments: ______________________________

____

____

JOB SHEET #2

		Performed well	Needs improvement
E.	Tested the trochlear nerve by turning eyes up and then turning them from side to side to side without turning head	☐	☐
	Comments: ______________________________		
F.	Tested the trigeminal nerve by asking the person to clench teeth and by checking face for reaction to pain and temperature	☐	☐
	Comments: ______________________________		
G.	Tested abducens nerve by having person turn eyes from side to side without moving head	☐	☐
	Comments: ______________________________		
H.	Tested facial nerve by having person wrinkle forehead, frown, whistle, and close eyelids tightly and by having patient taste sugar, salt, and quinine or some other bitter substance	☐	☐
	Comments: ______________________________		

JOB SHEET #2

		Performed well	Needs improvement
I.	Tested the auditory nerve by observing the person's ability to hear a whispered voice and by using the past-pointing test	☐	☐
	Comments: ____________________ ____________________ ____________________		
J.	Tested glossopharyngeal nerve by testing taste on posterior one-third of tongue and by testing ability to swallow	☐	☐
	Comments: ____________________ ____________________ ____________________		
K.	Tested accessory nerve by having person raise shoulders against resistance by pressure from the examiner's hands and by having person turn head to right and to left against resistance of examiner's hands	☐	☐
	Comments: ____________________ ____________________ ____________________		
L.	Tested hypoglossal nerve by having person protrude tongue	☐	☐
	Comments: ____________________ ____________________ ____________________		

NERVOUS SYSTEM AND SPECIAL SENSES
UNIT XIII

JOB SHEET #3--MEASURE VISION

I. Equipment

A. Snellen test chart

B. Disposable card or cup

II. Procedure

(NOTE: The power of vision is usually measured by having the individual read the Snellen test chart. Lines of letters of varying size are printed on the chart and beside each line is given the distance at which it can be read by persons having normal vision.)

A. Have subject being tested sit 20 feet (six meters) from the Snellen chart with eyes at level of 20 feet (six meters) line on chart

B. Cover one eye with disposable card or cup

C. Have subject read the letters as far as possible with the uncovered eye beginning with an upper line and reading down

(NOTE: If the person can read the line marked for vision at 20 feet, he or she has 20/20 vision. If the patient is only able to read the line that can be read by the normal eye at 100 feet, vision for that eye is 20/100. If she or he can read the line that the normal eye can read at 15 feet, vision is better than normal, 20/15.)

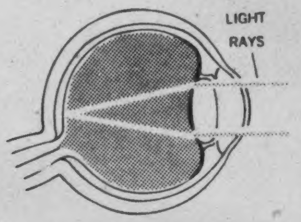
D. Determine the subject's vision for each eye separately

(NOTE: If person wears glasses or contact lenses, check vision with and without their use.)

E. Check for the following possible conditions

1. Emmetropia--Normal vision; objects at 20 feet form sharp images on the retina (Figure 1)

FIGURE 1



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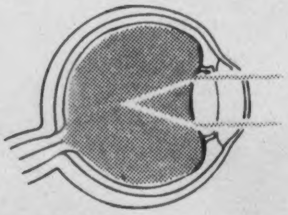
JOB SHEET #3

2. Myopia--Near-sightedness; objects at or beyond 20 feet form sharp images in front of the retina (Figure 2)

FIGURE 2



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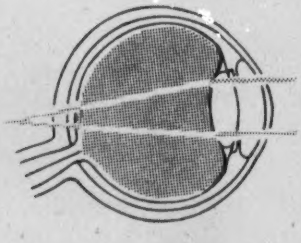
3. Hyperopia--Far-sightedness; objects at 20 feet form sharp images behind the retina (Figure 3)

FIGURE 3



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4. Astigmatism--Visual defect in the shape of the eyeball or lens so that light rays are focused unequally in the eyes

5. Strabismus--Cross-eye; occurs when the muscles of the eyes do not coordinate and the eyes do not work together

JOB SHEET #3

III. Checklist for measuring vision

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments:		
B.	Had the subject being tested sit 20 feet (six meters) from the Snellen chart with eyes at level of 20 feet (six meters) line on chart	☐	☐
	Comments:		
C.	Covered one eye with disposable card or cup	☐	☐
	Comments:		
D.	Had subject read the letters as far as possible with the uncovered eye, beginning with an upper line and reading down	☐	☐
	Comments:		
E.	Determined the subject's vision for each eye separately	☐	☐
	Comments:		

JOB SHEET #3

Performed well | Needs improvement

F. Checked for emmetropia ☐ ☐

Comments: ____________________

____

____

G. Checked for myopia ☐ ☐

Comments: ____________________

____

____

H. Checked for hyperopia ☐ ☐

Comments: ____________________

____

____

I. Checked for astigmatism ☐ ☐

Comments: ____________________

____

____

J. Checked for strabismus ☐ ☐

Comments: ____________________

____

____

NERVOUS SYSTEM AND SPECIAL SENSES
UNIT XIII

JOB SHEET #4--TEST HEARING

I. Equipment--Pocket watch or stop watch

II. Procedure

   A. Have subject close eyes and cover one ear with hand

   B. Hold the watch close to the uncovered ear

   C. Gradually move away

   D. Note the distance at which the watch is no longer heard

   E. Wait a few seconds

   F. Hold watch at a point farther from subject

   G. Gradually move toward the uncovered ear

   H. Note the distance at which the watch is heard

   I. Record your findings

   J. Give a possible explanation for differences noted

   K. Repeat for other ear

JOB SHEET #4

III. Checklist for testing hearing

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐
	Comments: ____________________		
B.	Had subject close eyes and cover one ear with hand	☐	☐
	Comments: ____________________		
C.	Held the watch close to the uncovered ear	☐	☐
	Comments: ____________________		
D.	Gradually moved away	☐	☐
	Comments: ____________________		
E.	Noted the distance at which the watch was no longer heard	☐	☐
	Comments: ____________________		

JOB SHEET #4

		Performed well	Needs improving
F.	Waited a few seconds	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improving
G.	Held watch at a point farther from the subject	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improving
H.	Gradually moved toward the uncovered ear	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improving
I.	Noted the distance at which the watch was heard	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improving
J.	Recorded findings	☐	☐

Comments: ______________________________

____

____

JOB SHEET #4

	Performed well	Needs improvement
K. Gave a possible explanation for differences noted	☐	☐

Comments: ______________________________

____

____

L. Repeated for other ear	☐	☐

Comments: ______________________________

____

____

NERVOUS SYSTEM AND SPECIAL SENSES
UNIT XIII

JOB SHEET #5--IRRIGATE EAR

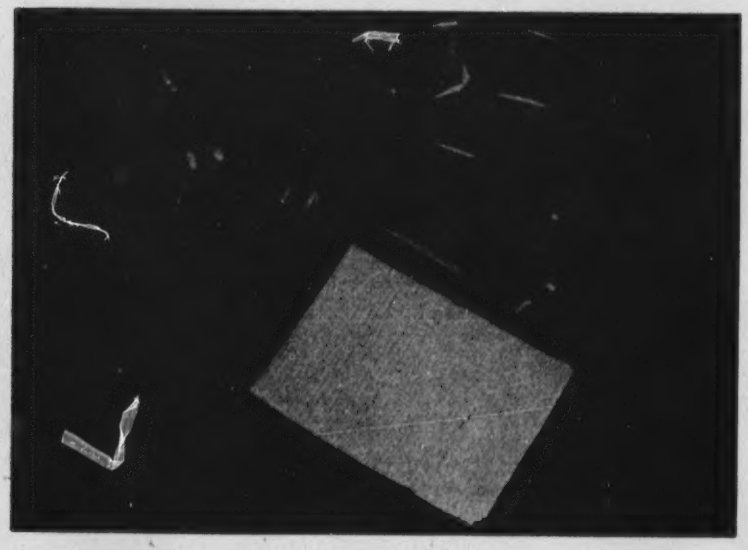
(NOTE: Many times, cerumen will fill the ear and impair hearing, making the patient very uncomfortable. At this time many physicians will recommend the ear be irrigated. If the secretion is not difficult to remove, the nurse may irrigate and remove the plug. Often drops will be instilled in ear to soften cerumen before irrigation takes place.)

I. Equipment

   A. Towel

   B. Irrigating ear syringe (Figure 1)

FIGURE 1



   C. Basin

   D. Irrigation solution

   (NOTE: Irrigating solution may be warmed to 100-105°F [38-41°C].)

II. Procedure

   A. Wash hands

   B. Assemble equipment

   C. Identify patient and explain procedure

   D. Drape towel over the shoulder on the affected side

JOB SHEET #5

E. Place basin under the ear or have patient hold it in place if possible

F. Draw tepid water into irrigating syringe and expel any remaining air

(NOTE: Test on your hand to make sure the water is not too cold or hot as this could be quite painful and cause damage to inner ear.)

G. Place tip of syringe into ear

(NOTE: Be sure ear canal is straight by pulling ear upward and backward for an adult and downward and backward for a child.)

H. Push plunger of syringe at an even force causing a steady but not too rapid stream of water into the ear

(NOTE: You should see immediate return of the water into the basin. Check contents to see if any of the cerumen has been removed.)

(**CAUTION**: This procedure should not cause undue pain but if the patient does complain of pain, stop immediately and have physician look at ear. It may be caused by an extreme inflammation of the ear that could not be seen when first viewed.)

I. Repeat procedure if needed

(NOTE: Physician may want to look at ear to determine if manual removal is needed.)

J. Pat outer ear and just inside the auricle dry

(NOTE: Some physicians like to follow the irrigation with alcohol swabs to help dry the canal more quickly. Follow instructions given.)

JOB SHEET #5

III. Checklist for irrigating ear

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
B.	Washed hands properly	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
C.	Assembled equipment	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
D.	Identified patient and explained procedure	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
E.	Draped towel over the shoulder on the affected side	☐	☐

Comments: ______________________________

____

____

JOB SHEET #5

	Performed well	Needs improvement
F. Placed basin under the ear or had patient hold it in place if possible	☐	☐
Comments: ______________________________		
G. Drew tepid water into irrigating syringe and expelled any remaining air	☐	☐
Comments: ______________________________		
H. Placed tip of syringe into ear	☐	☐
Comments: ______________________________		
I. Pushed plunger of syringe at an even force causing a steady but not too rapid stream of water into the ear	☐	☐
Comments: ______________________________		
J. Repeated procedure if needed	☐	☐
Comments: ______________________________		

JOB SHEET #5

	Performed well	Needs improvement
K. Patted outer ear and just inside the auricle dry	☐	☐

Comments: ______________________________

NERVOUS SYSTEM AND SPECIAL SENSES
UNIT XIII

JOB SHEET #6--EXAMINE EYES

(NOTE: When eyes are examined in an emergency situation you must act quickly, but use gentle and calm procedures. Foreign bodies in the eye are major causes for emergency treatment but you may be dealing with other conditions and may need to use this method for examining the eyes.)

I. Equipment

   A. Cotton swabs

   B. Small flashlight

II. Procedure

   A. Wash hands

   B. Explain procedure to patient

      (NOTE: It is difficult for many persons to have their eyes examined and this may promote anxiety. Reassure them and tell them to relax as much as possible.)

   C. Seat patient in a well-lit area facing you

   D. Evert the lower eyelid by gently pulling it down over the lower orbital rim

      (**CAUTION**: Use very gentle pressure and do not use fingernails.)

   E. Have patient look up, down, right, and left

   F. Examine the condition including color, tissue, and discharge

   G. Ask patient to look down

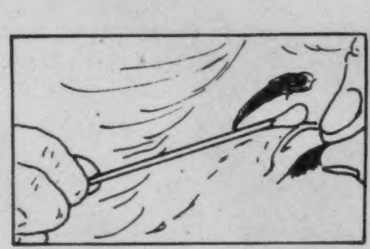
   H. Grasp upper eyelid and eyelashes

   I. Pull the lashes down and forward

JOB SHEET #6

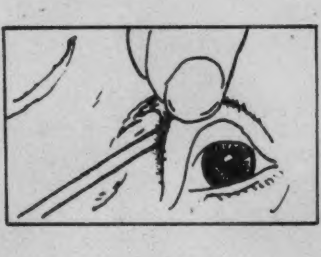
J. Place a cotton swab, using other hand on top of the eyelid, just above the fold (Figure 1)

FIGURE 1



K. Roll the eyelid up over the swab and with one finger press eyelashes against the upper orbital rim (Figure 2)

FIGURE 2



L. Examine carefully

M. Have patient look up while you pull forward on eyelashes and gently let the eyelid close

N. Examine other eye

(NOTE: Depending on your findings, proceed to appropriate treatment. If the condition requires irrigation as in a loose foreign object you may use the next job sheet.)

JOB SHEET #6

III. Checklist for examining eyes

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
B. Washed hands properly	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
C. Explained procedure to patient	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
D. Seated patient in a well-lit area facing examiner	☐	☐

Comments: ______________________________

____

____

	Performed well	Needs improvement
E. Everted the lower eyelid by gently pulling it down over the lower orbital rim	☐	☐

Comments: ______________________________

____

____

JOB SHEET #6

		Performed well	Needs improvement
F.	Had patient look up, down, right, and left	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
G.	Examined the condition including color, tissue, and discharge	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
H.	Asked patient to look down	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
I.	Grasped upper eyelid and eyelashes	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
J.	Pulled the lashes down and forward	☐	☐

Comments: ______________________________

____

____

JOB SHEET #6

		Performed well	Needs improvement
K.	Placed a cotton swab, using other hand on top of eyelid, just above the fold	☐	☐
	Comments: ____________		
L.	Rolled the eyelid up over the swab and with one finger pressed eyelashes against the upper orbital rim	☐	☐
	Comments: ____________		
M.	Examined carefully	☐	☐
	Comments: ____________		
N.	Had patient look up while pulling forward on eyelashes and gently let the eyelid close	☐	☐
	Comments: ____________		
O.	Examined other eye	☐	☐
	Comments: ____________		

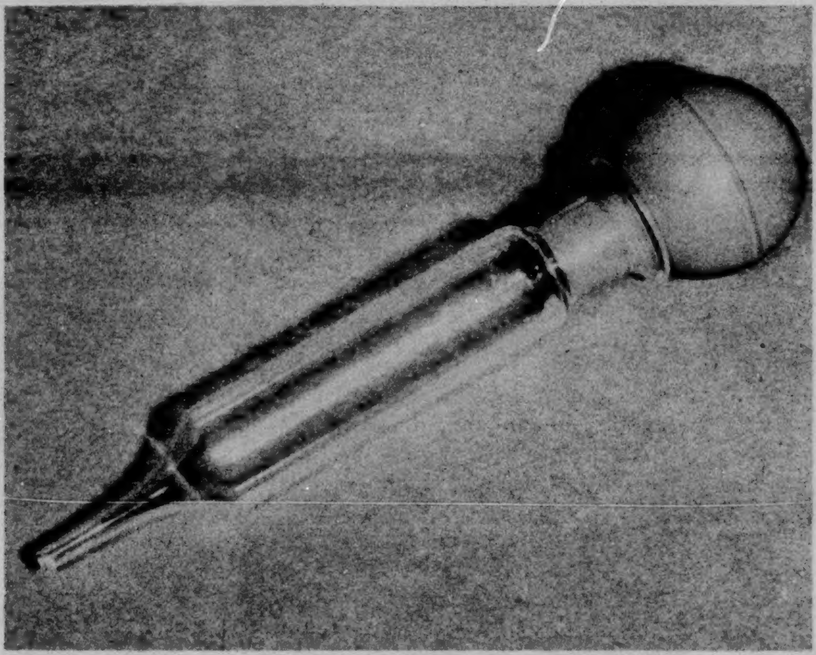
NERVOUS SYSTEM AND SPECIAL SENSES
UNIT XIII

JOB SHEET #7--IRRIGATE EYES

I. Equipment

A. Bulb syringe (Figure 1)

FIGURE 1



B. Prescribed solution at room temperature

(NOTE: Unless physician requests specific solution, normal saline can be used.)

C. Emesis basin

D. Towels

E. Gauze pads or cotton

F. Local anesthetic (optical)

II. Procedure

A. Wash hands

B. Identify patient and explain procedure

C. Position patient on affected side with towel draped around neck

(NOTE: This is done so that the contaminated fluid won't run from affected eye into other eye.)

D. Moisten one of the sterile gauze pads with sterile saline and clean any debris from eyelid if there is no foreign object in eye

(**CAUTION:** Always wipe from inner to outer canthus to prevent contamination. If you suspect a foreign object in eye do not press on eyelid as that may cause the object to imbed.)

E. Instill a local anesthetic (optical) if ordered

(NOTE: In many controlled emergency areas the local anesthetic is instilled into the eye. This is done for the comfort of the patient because the normal saline is irritating and burns due to the salt content. In a critical situation irrigation can be done with a water fountain, hose, or faucet if needed.)

F. Use thumb and index finger to open the eyelids

G. Hold bulb syringe in the other hand and squeeze gently to direct a stream of fluid into the inner canthus of the eye

(**CAUTION:** Do not touch the tip of the syringe to the eye.)

H. Save the piece of foreign object if this is what has caused the condition

I. Pat sterile gauze pad gently over the eyelid and face

J. Chart procedure; ask physician to examine eye further

(NOTE: If this emergency occurs at home and must be taken care of immediately, do not hesitate to use a water fountain or water faucet. Flush the eye for at least 15 minutes, especially if condition is caused from a caustic substance.)

JOB SHEET #7

III. Checklist for irrigating eyes

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
B.	Washed hands properly	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
C.	Identified patient and explained procedure	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
D.	Positioned patient on affected side with towel draped around neck	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
E.	Moistened one of the sterile gauze pads with sterile saline and cleaned any debris from eyelid if there was no foreign object in eye	☐	☐

Comments: ____________________

____

____

JOB SHEET #7

		Performed well	Needs improvement
F.	Instilled a local anesthetic if ordered	☐	☐
	Comments: ____________________		
G.	Used thumb and index finger to open the eyelids	☐	☐
	Comments: ____________________		
H.	Held bulb syringe in the other hand and squeezed gently to direct a stream of fluid into the inner canthus of the eye	☐	☐
	Comments: ____________________		
I.	Saved the piece of foreign object if that was what had caused the condition	☐	☐
	Comments: ____________________		
J.	Patted sterile gauze pad gently over the eyelid and face	☐	☐
	Comments: ____________________		

JOB SHEET #7

	Performed well	Needs improvement
K. Charted procedure; asked physician to examine eye further	☐	☐

Comments: ______________________________

____

____

NERVOUS SYSTEM AND SPECIAL SENSES
UNIT XIII

JOB SHEET #8--ADMINISTER EYE, EAR, AND NOSE MEDICATIONS

I. Equipment

   A. Medication

   B. 4 x 4's or tissue wipes

II. Procedure for eye medications

   A. Check with chart to make sure medication order is correct

      (NOTE: Determine amount of medication to be used and whether instillation is for one or both eyes.)

   B. Wash hands

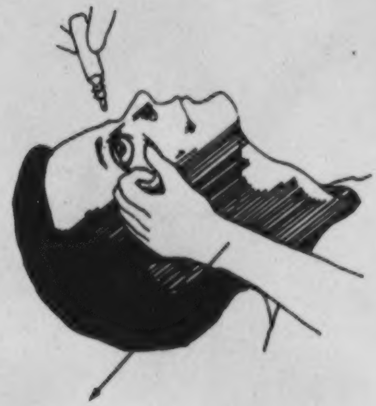
   C. Assemble equipment

   D. Identify patient and explain procedure

   E. Position patient for ease of instillation

   F. Pull lower eyelid down very gently with forefinger or thumb of one hand, holding a 4 x 4 or tissue to absorb excess fluid or ointment; do not press on eyeball (Figure 1)

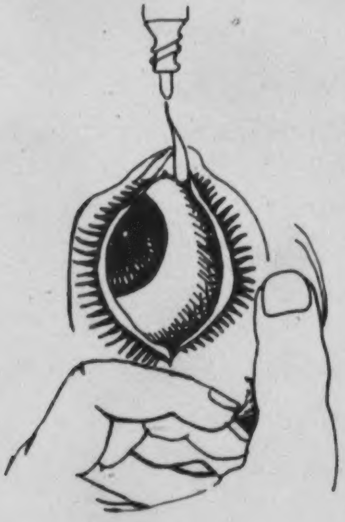
FIGURE 1



G. Have patient look upward to remove the sensitive cornea from the point of instillation

H. Place prescribed drops near inner canthus if drops are used, or place line of ointment along lower eyelid; do not allow dispenser to touch the eye (Figure 2)

FIGURE 2



I. Have patient close eye

J. Apply dressing, if directed

K. Provide for patient's comfort

L. Return equipment to proper place

M. Wash hands

N. Record treatment

III. Procedure for ear medications

A. Check with chart to make sure medication order is correct

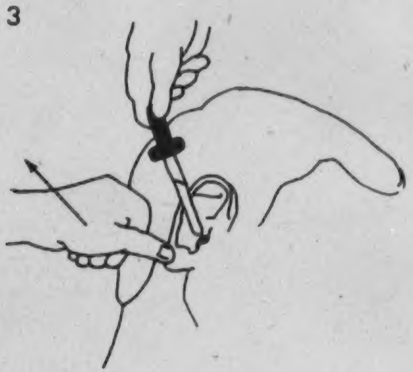
B. Wash hands

C. Assemble equipment

JOB SHEET #8

D. Position patient by turning head so that the ear being treated faces upward (Figure 3)

FIGURE 3

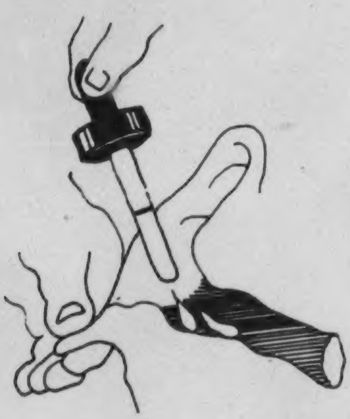


E. Hold external ear gently to expose orifice

1. For an adult, pull pinna up and back
2. For a child, pull lobe down and back

F. Drop the medication against the internal wall of the canal (Figure 4)

FIGURE 4



G. Place small cotton ball in outer ear to cover orifice

H. Provide for patient's comfort

I. Return equipment to proper place

JOB SHEET #8

J. Wash hands

K. Record treatment

IV. Procedure for nose instillations

A. Check with physician to make sure medication order is correct

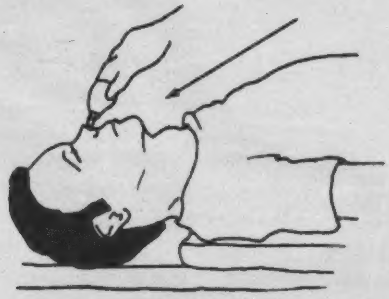
B. Wash hands

C. Assemble equipment

D. Identify patient and explain procedure

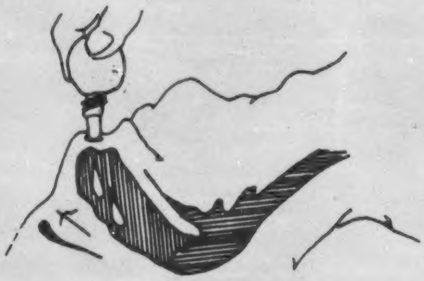
E. Tilt patient's head back by elevating the shoulders with a pillow or by having the patient hang head over the edge of the bed (Figure 5)

FIGURE 5



F. Instill prescribed amount (Figure 6)

FIGURE 6



G. Provide for patient's comfort

H. Return equipment to proper place

I. Wash hands

J. Record treatment

JOB SHEET #8

V. Checklist for administering eye medications

		Performed well	Needs improvement
A.	Gathered necessary equipment	☐	☐

Comments: ______________________________

____

____

B.	Checked with chart to make sure medication order was correct	☐	☐

Comments: ______________________________

____

____

C.	Washed hands properly	☐	☐

Comments: ______________________________

____

____

D.	Assembled equipment	☐	☐

Comments: ______________________________

____

____

E.	Identified patient and explained procedure	☐	☐

Comments: ______________________________

____

____

JOB SHEET #8

		Performed well	Needs improvement
F.	Positioned patient for ease of instillation	☐	☐
	Comments: ______________________		
G.	Pulled lower eyelid down gently with forefinger or thumb of one hand, holding a 4 x 4 or tissue to absorb excess fluid or ointment; did not press on eyeball	☐	☐
	Comments: ______________________		
H.	Had patient look upward to remove the sensitive cornea from the point of instillation	☐	☐
	Comments: ______________________		
I.	Placed prescribed drops near inner canthus if drops were used, or placed line of ointment along lower eyelid; did not allow dispenser to touch the eye	☐	☐
	Comments: ______________________		

JOB SHEET #8

		Performed well	Needs improvement
J.	Had patient close eye	☐	☐
	Comments: ____________________ ____________________ ____________________		
K.	Applied dressing, if directed	☐	☐
	Comments: ____________________ ____________________ ____________________		
L.	Provided for patient's comfort	☐	☐
	Comments: ____________________ ____________________ ____________________		
M.	Returned equipment to proper place	☐	☐
	Comments: ____________________ ____________________ ____________________		
N.	Washed hands properly	☐	☐
	Comments: ____________________ ____________________ ____________________		
O.	Recorded treatment	☐	☐
	Comments: ____________________ ____________________ ____________________		

JOB SHEET #8

VI. Checklist for administering ear medications

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________________________		
B. Checked with chart to make sure medication order was correct	☐	☐
Comments: ______________________________		
C. Washed hands properly	☐	☐
Comments: ______________________________		
D. Positioned patient by turning head so that the ear being treated faced upward	☐	☐
Comments: ______________________________		
E. Held external ear gently to expose orifice	☐	☐
Comments: ______________________________		

JOB SHEET #8

	Performed well	Needs improvement
F. Dropped the medication against the internal wall of the canal	☐	☐

Comments: ____

____

____

	Performed well	Needs improvement
G. Placed small cotton ball in outer ear to cover orifice	☐	☐

Comments: ____

____

____

	Performed well	Needs improvement
H. Provided for the patient's comfort	☐	☐

Comments: ____

____

____

	Performed well	Needs improvement
I. Returned equipment to proper place	☐	☐

Comments: ____

____

____

	Performed well	Needs improvement
J. Washed hands properly	☐	☐

Comments: ____

____

____

JOB SHEET #8

	Performed well	Needs improvement
K. Recorded treatment	☐	☐

Comments: ____________________

____

____

VII. Checklist for administering nose instillations

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ____________________

____

____

B. Checked with physician to make sure medication order was correct	☐	☐

Comments: ____________________

____

____

C. Washed hands properly	☐	☐

Comments: ____________________

____

____

D. Identified patient and explained procedure	☐	☐

Comments: ____________________

____

____

JOB SHEET #8

	Performed well	Needs improvement
E. Tilted patient's head back by elevating the shoulders with a pillow or by having the patient hang head over the edge of the bed	☐	☐
Comments:		
F. Instilled prescribed amount	☐	☐
Comments:		
G. Provided for patient's comfort	☐	☐
Comments:		
H. Returned equipment to proper place	☐	☐
Comments:		
I. Washed hands properly	☐	☐
Comments:		

JOB SHEET #8

J. Recorded treatment ☐ ☐

Comments: ____________________

____

____

PN I - 1559-C

NERVOUS SYSTEM AND SPECIAL SENSES
UNIT XIII

TEST

NAME____ SCORE __________________

1. Match terms associated with the nervous system to the correct definitions. Write the correct numbers in the blanks.

_____a. Twelve pairs that convey special and general sense impulses and control voluntary muscles, glands, and involuntary muscles

_____b. Repair, re-growth, or restoration of a part

_____c. Nonmyelinated nervous tissue; primarily the bodies of nerve cells

_____d. Study of the nervous system

_____e. Part of the neuron that carries impulses to the cell body

_____f. Supporting structure for nerve tissue consisting of blood vessels, connective tissue, and specialized cells

_____g. Pertaining to the back of the head

_____h. Part of the neuron that conducts impulses away from the cell body; each cell has one

_____i. Basic nerve cell

_____j. Mass of nerve tissue, principally nerve cell bodies, outside the central nervous system

_____k. Group of cells functioning in reception of stimuli; receiving end of sensory nerves

_____l. Automatically regulates the action of the glands, the smooth muscles of the hollow organs, and the heart, often without one being aware of it

_____m. Watery fluid found in the ventricles of the cerebrum and surrounding the spinal cord

1. Neurology
2. Neuron
3. Cranial nerves
4. Autonomic nervous system
5. Occipital
6. Ganglion
7. Affector
8. Neuroglia
9. Gray matter
10. Regeneration
11. Cerebrospinal fluid
12. Dendrite
13. Axon

______n. Nerve endings that carry out actions

______o. Junction of an axon and one or more dendrites

______p. Cell body that acts as a sending and receiving center, carries on metabolism, and stores energy

______q. Bundle of nerve cells within the central nervous system

______r. Outer layer of gray matter of the cerebrum

______s. Nervous tissue composed of myelinated nerve fibers

______t. One of the small cavities of the brain

______u. Bundle of nerve fibers, blood vessels, and connective tissue outside the central nervous system

______v. Any agent or influence that produces a response or increase in activity in living protoplasm

______w. Threadlike projections of cytoplasm from the cell body of a neuron; axons and dendrites

______x. Consists of nerve tissues that form the brain and spinal cord; controls voluntary acts

______y. Provides input from sensory receptors to the central nervous system and output from the central nervous system to effectors

14. White matter
15. Nerve fibers
16. Nerve tract
17. Effector
18. Cerebral cortex
19. Cyton
20. Ventricle
21. Stimulus
22. Synapse
23. Nerve
24. Peripheral nervous system
25. Central nervous system

2. Select from the following list functions of the nervous system. Mark an "X" in the correct blanks.

______a. Storage of information (memory)

______b. Stimulation of pigmentation of skin

______c. Reception of external stimuli

______d. Coordination of all body activities

______e. Determination of eye color

______f. Response and readjustment to internal and external stimuli

______g. Secretion of hormones

______h. Coordination of internal messages

3. Distinguish among divisions of the nervous system. Write a "C" for central nervous system, a "P" for peripheral nervous system, and an "A" for autonomic nervous system.

______a. Glandular action

______b. Spinal cord

______c. Smooth muscles of hollow organs

______d. Cranial nerves

______e. Cardiac muscle

______f. Spinal nerves

______g. Brain

4. Match types of neurons to their functions. Write the correct numbers in the blanks.

______a. Conduct messages or impulses from sensory to motor nerves

______b. Transmit messages from the central nervous system to all parts of the body

______c. Receive messages from all parts of the body and transmit them to the central nervous system

1. Afferent or sensory
2. Internuncial, central, or connecting
3. Efferent, or motor

5. Describe the layers of an axon.

a. Axis cylinder-- ____

____

____

b. Myelin sheath-- ____

____

____

c. Neurilemma-- ____

____

____

6. Arrange in order the mechanism of regeneration of peripheral nerves. Write a "1" for the first mechanism, a "2" for the second mechanism, and so on in the blanks.

   ______a. Remaining stump of the axon attached to the cell body is able to grow in the repaired tube

   ______b. Part of the fiber separated from the cell body disintegrates

   ______c. Neurilemma starts to regenerate at the site of injury

7. List in order the actions of transmission of nerve signals.

   a. ____

   ____

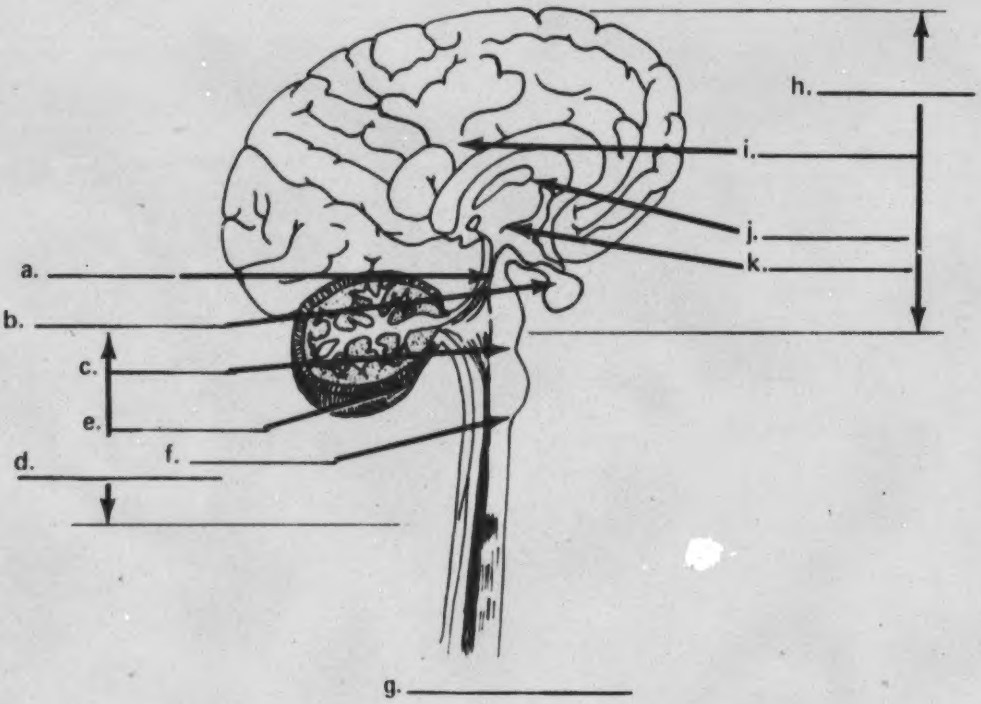
   b. ____

   ____

   c. ____

   ____

8. Label the main sections of the central nervous system. Write the correct names in the blanks.



9. Match the areas of the cerebral cortex to their functions. Write the correct numbers in the blanks.

______a. Receives impulses of heat, cold, touch, pain, and pressure from receptors

______b. Controls movement of muscles

______c. Controls higher mental functions

1. Motor area
2. Sensory area
3. Association area

10. Match parts of the brain to their correct functions. Write the correct numbers in the blanks.

______a. Connects the cerebrum and cerebellum

______b. Controls sensory functions, such as pain, touch, and temperature interpretation

______c. Controls vision

______d. Maintains balance, equilibrium, coordination, and muscle tone

______e. Controls body temperature, water balance, sleep, appetite, some emotions such as fear and pleasure, and both divisions of the autonomic nervous system

______f. Controls voluntary muscles and judgment

______g. Controls hearing, smell, and taste

______h. Serves as a reflex center

______i. Controls vital functions, such as breathing, heart rate, blood pressure, swallowing, and coughing

______j. Serves as relay center; monitors sensory stimuli

1. Frontal lobe of cerebrum
2. Parietal lobe of cerebrum
3. Temporal lobe of cerebrum
4. Occipital lobe of cerebrum
5. Thalamus
6. Hypothalamus
7. Midbrain
8. Pons
9. Medulla
10. Cerebellum

11. Select from the following list functions of the spinal cord. Mark an "X" in the correct blanks.

______a. Acts as a protective pad for vertebrae

______b. Serves as a reflex center to receive and transmit messages through nerve fibers

______c. Aids in coordinating higher mental functions

______d. Conducts impulses to and from the brain

______e. Secretes enzymes

12. Describe the protection of the central nervous system.

    a. Fragile nervous tissue-- ____________________

    b. Brain-- ____________________

    c. Spinal cord-- ____________________

    d. Cranial bones and vertebrae-- ____________________

13. Describe vessels that supply blood to the brain.

    ____

    ____

    ____

    ____

    ____

    ____

14. Match the formation, purpose, and absorption of cerebrospinal fluid to the correct definitions. Write the correct numbers in the blanks.

_____a. Fluid circulates around the brain and spinal cord, maintaining an even pressure and acting as a cushion or shock absorber	1. Formation 2. Purpose
_____b. Fluid is continually absorbed by the blood vessels to maintain constant volume, pressure, and composition	3. Absorption
_____c. Fluid is produced constantly by filtration from the blood in the capillaries of the brain and in the ventricles	

15. Complete the chart showing names and specific functions of the cranial nerves.

NAME	NUMBER	FUNCTION
a. ____________	I	Sense of smell
Optic	II	b. ____________
Oculomotor	c. ________	Controls part of the eyeball muscles
Trochlear	d. ________	Controls one eyeball muscle
e. ____________	V	Three branches supply cornea and conjunctiva; upper portion of face, ear, lower lip, teeth, and gums; and muscles for chewing
Abducens	VI	f. ____________ ____________
g. ____________	VII	Supplies facial muscles, middle ear, taste
Auditory	h. ________	Sense of hearing and balance
i. ____________	IX	Taste, swallowing
Vagus	X	j. ____________ ____________ ____________ ____________
Spinal accessory	k. ________	Controls muscles of neck and upper back
Hypoglossal	XII	l. ____________

16. List the spinal nerves and the number of pairs in each.

	Name	Number of pairs
a.	____________	____________
b.	____________	____________
c.	____________	____________
d.	____________	____________
e.	____________	____________

17. Describe the reflex arc.

____

____

____

18. Describe divisions of the autonomic nervous system.

a. Sympathetic thoracolumbar-- ____________________

____

b. Parasympathetic craniosacral-- ____________________

____

19. Match terms associated with the special senses to the correct definitions. Write the correct numbers in the blanks.

_____a. Cavity in the bone in which the eye is located

_____b. Person trained and licensed to examine the eyes for vision problems and to prescribe and adapt lenses

_____c. General faculty through which conditions outside or inside the body are perceived

_____d. Outside a part

_____e. Pertaining to the sense of hearing

_____f. Study of the ear and its diseases

_____g. Receptors of taste found in the tongue

_____h. Stirrup-shaped bone of middle ear

_____i. Adjustment by the lens to make a sharp, clear image on the retina

_____j. Hammer-shaped bone of the middle ear

_____k. Study of the eye and its diseases

_____l. Within a part

_____m. Waxlike, soft, brown secretion found in the external ear canal; lubricates and protects external canal and tympanum/tympanic membrane

1. Orbit
2. Auditory
3. Optometrist
4. Sense
5. Extrinsic
6. Otology
7. Taste buds
8. Malleus
9. Intrinsic
10. Cerumen
11. Ophthalmology
12. Accommodation
13. Stapes

______n. Anvil-shaped bone of the middle ear

______o. Angle at either end of the slit between the eyelids

______p. Pertaining to sense of smell

______q. Physician who specializes in the treatment of eye disorders

______r. Normal orientation of the body in respect to its environment

______s. One who makes lenses and fits glasses

14. Equilibrium
15. Incus
16. Olfactory
17. Canthus
18. Ophthalmologist
19. Optician

20. List the basic senses.

a. ______________________________

1) ______________________________

2) ______________________________

3) ______________________________

4) ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

21. Match eye and accessory structures to the correct functions. Write the correct numbers in the blanks.

______a. Levators which open and close eyelids

______b. Outer white layer of firm, connective tissue covering the eyeball

______c. Middle vascular layer on lateral and posterior eyeball; supplies oxygen and nutrients

______d. In upper and lower eyelids at inner edge; carry tears from eye to nasal cavity

______e. Holds lens in place

______f. Jelly-like substance filling the eyeball posterior to the lens; maintains shape of eyeball

______g. Carries visual impulses from retina to brain

1. Eyelid muscles
2. Choroid
3. Lacrimal ducts
4. Optic nerve
5. Sclera
6. Suspensory or ciliary ligament
7. Vitreous humor

______h. Covers the front of the eyeball; lines the eyelid; aids in keeping the eye moist

______i. Clear, transparent part of the sclera on the front of eyeball; allows light through

______j. Inner layer of nerve tissue partially made up of rods and cones, special light sensitive cells; receives visual images

______k. Circular muscle; regulates amount of light entering pupil; the pigmented or colored part of the eye

______l. Lies superior and lateral to eyeball; secretes tears which moisten and cleanse eye and destroy some bacteria

______m. Controls part of eye muscles

______n. Circular jelly-like suspension; focuses images on retina

______o. Carries impulses of pain, touch, and temperature from eye and surrounding parts

______p. Space between iris and lens

______q. Controls shape of lens to make sharp, clear image

______r. Space in front of lens between cornea and iris filled with aqueous humor

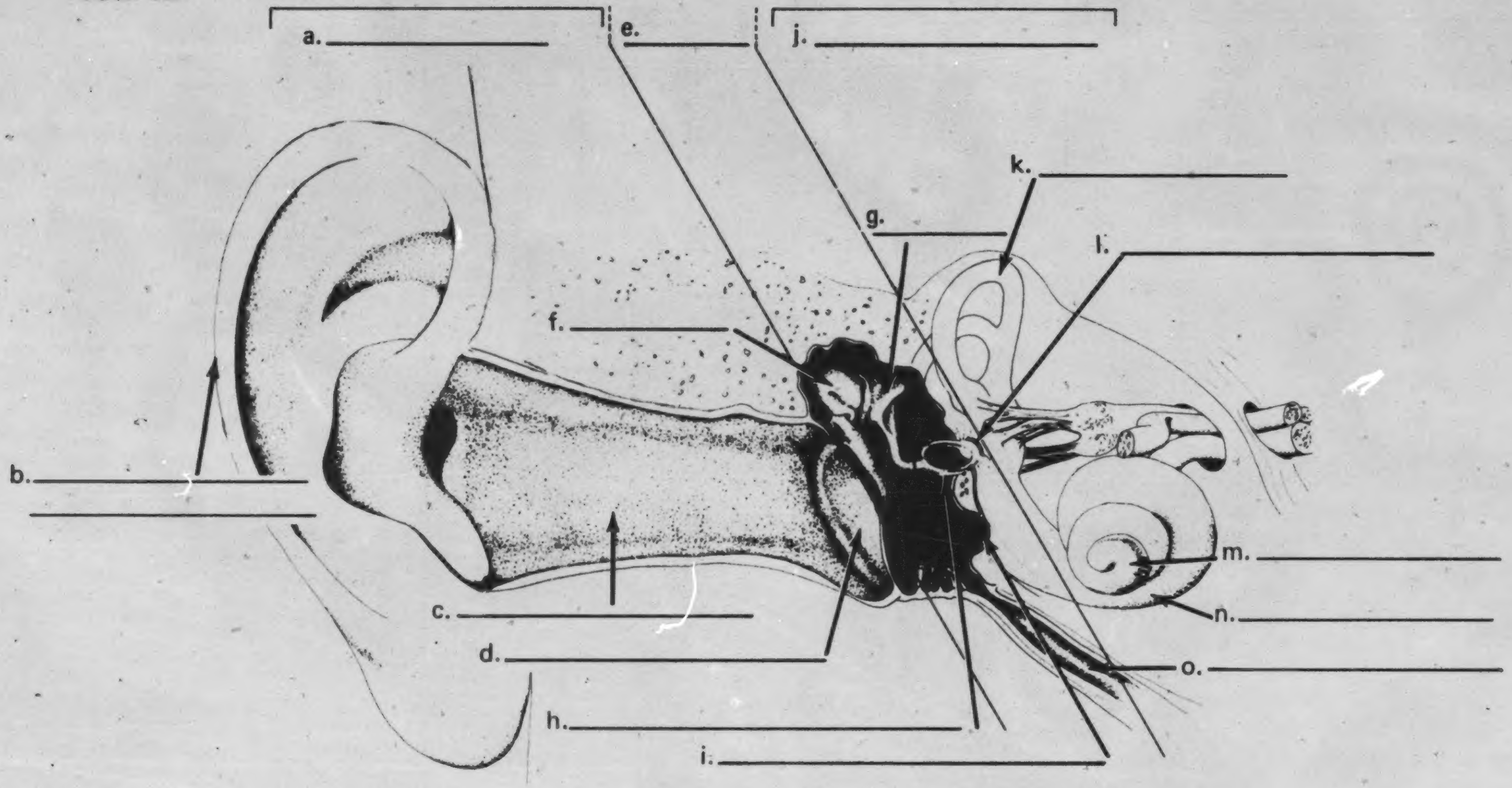
8. Cornea
9. Anterior chamber
10. Posterior chamber
11. Lens
12. Retina
13. Ciliary muscle
14. Lacrimal gland
15. Iris
16. Conjunctiva
17. Oculomotor nerve
18. Ophthalmic nerve

22. Identify structures of the ear. Write the correct names in the blanks.

Tympanic membrane
(eardrum)
Oval window
Inner ear
Semicircular canals
Outer ear

Pinna or auricle
Middle ear
Incus
Round window
Cochlea

External auditory canal
Malleus
Stapes
Eustachian tube
Vestibule



1781

1782

PN I - 1569-C

23. Discuss the sense of taste.

24. Discuss the sense of smell.

25. Describe reaction of taste buds.

26. Demonstrate the ability to:

   a. Test reflexes.

   b. Test cranial nerves.

   c. Measure vision.

   d. Test hearing.

   e. Irrigate ear.

   f. Examine eyes.

g. Irrigate eyes.

h. Administer eye, ear, and nose medications.

(NOTE: If activities 25 and 26 have not been finished before the test, ask your instructor when they should be completed.)

NERVOUS SYSTEM AND SPECIAL SENSES
UNIT XIII

ANSWERS TO TEST

1. a. 3
   b. 10
   c. 9
   d. 1
   e. 12
   f. 8
   g. 5
   h. 13
   i. 2
   j. 6
   k. 7
   l. 4
   m. 11
   n. 17
   o. 22
   p. 19
   q. 16
   r. 18
   s. 14
   t. 20
   u. 23
   v. 21
   w. 15
   x. 25
   y. 24
2. a, c, d, f, h
3. a. A
   b. C
   c. A
   d. P
   e. A
   f. P
   g. C
4. a. 2
   b. 3
   c. 1
5. Descriptions should include:
   a. Axis cylinder--Central core of jelly-like material
   b. Myelin sheath--Fatty covering which provides insulation and speeds impulse conduction; nerve fibers covered with myelin are called myelinated

c. Neurilemma--Thin membrane with nuclei called Schwann cells completely covering the nerve fiber; regenerates nerve fibers

6. a. 3

b. 1

c. 2

7. a. Neuron sends an impulse to the next neuron across the synapse, between axon and dendrite, when it receives a signal

b. Two or more neurons conduct impulses from one place to another, in a chain function

c. Impulses pass only in one direction from receptor dendrite, to cell body, to axon, to dendrite, and so on

8. a. Midbrain

b. Pituitary

c. Pons

d. Hindbrain

e. Cerebellum

f. Medulla oblongata

g. Spinal cord

h. Forebrain

i. Cerebrum

j. Thalamus

k. Hypothalamus

9. a. 2

b. 1

c. 3

10. a. 8

b. 2

c. 4

d. 10

e. 6

f. 1

g. 3

h. 7

i. 9

j. 5

11. b, d

12. Description should include:

a. Fragile nervous tissue--Is protected by fluid, membrane, and bones

b. Brain--Is covered by cranial bones

c. Spinal cord--Is surrounded by vertebrae

d. Cranial bones and vertebrae--Are lined with meninges, tough membranes

13. Description should include:

    a. Four arteries, two internal carotids, and two vertebral vessels unite to form the Circle of Willis at the base of the brain

    b. Circular arrangement of the arteries equalizes the circulation of blood and provides an alternate passageway for blood in case of blockage of one of the arteries

14. a. 2

    b. 3

    c. 1

15. a. Olfactory

    b. Sense of sight

    c. III

    d. IV

    e. Trigeminal

    f. Controls lateral eye movement

    g. Facial

    h. VIII

    i. Glossopharyngeal

    j. Swallowing, hunger, speech muscles, breathing, heart rate, peristalsis, control of glands in stomach and pancreas

    k. XI

    l. Controls tongue muscles

16.	Name	Number of pairs
a.	Cervical	Eight
b.	Thoracic	Twelve
c.	Lumbar	Five
d.	Sacral	Five
e.	Coccygeal	One

17. Description should include:

    a. Is the simplest type of nerve response which is unconscious and involuntary

b. Involves an affector, an afferent neuron, a connecting neuron in the spinal cord, an efferent neuron, and an effector

18. Description should include:

    a. Sympathetic thoracolumbar--System increases certain automatic functions and can be thought of as an emergency nervous system

    b. Parasympathetic craniosacral--System counteracts the effects of the sympathetic thoracolumbar system and usually dominates most automatic functions

19.	a.	1	k.	11
	b.	3	l.	9
	c.	4	m.	10
	d.	5	n.	15
	e.	2	o.	17
	f.	6	p.	16
	g.	7	q.	18
	h.	13	r.	14
	i.	12	s.	19
	j.	8		

20. a. Special senses
    1) Vision
    2) Hearing
    3) Taste
    4) Smell

    b. Hunger and thirst

    c. Touch, pressure, temperature, and pain

    d. Position and balance

21.	a.	1	f.	7
	b.	5	g.	4
	c.	2	h.	16
	d.	3	i.	8
	e.	6	j.	12

k. 15
l. 14
m. 17
n. 11
o. 18
p. 10
q. 13
r. 9

22. a. Outer ear
    b. Pinna or auricle
    c. External auditory canal
    d. Tympanic membrane (eardrum)
    e. Middle ear
    f. Malleus
    g. Incus
    h. Stapes
    i. Round window
    j. Inner ear
    k. Semicircular canals
    l. Oval window
    m. Cochlea
    n. Vestibule
    o. Eustachian tube

23. Discussion should include:

    a. Taste buds relay impulses to two different nerves which carry the impulses to the brain

    b. Taste buds are stimulated only if substance to be tasted is in solution

    c. Different kinds of taste buds have separate locations on the tongue

        1) Sweet taste is located near the tip of the tongue

        2) Sour taste is located at the sides of the tongue

        3) Salty taste is located near the tip of the tongue

        4) Bitter taste is located at the back of the tongue

24. Discussion should include:

    a. Sense of smell is closely related to the sense of taste

    b. Receptors are located in the olfactory epithelium in the upper part of the nasal cavity

    c. Olfactory nerve carries smell impulses to the brain

    d. Olfactory nerves tire quickly and become less sensitive after detecting the same odor for a period of time

25. Evaluated to the satisfaction of the instructor

26. Performance skills evaluated to the satisfaction of the instructor

ENDOCRINE SYSTEM
UNIT XIV

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of the endocrine system to assist with diagnostic procedures and patient education. The student should also be able to perform tests to determine sugar and acetone content in the diabetic patient's urine. This knowledge will be evidenced by completion of job sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the endocrine system to the correct definitions.
2. Select from a list fundamental facts about endocrine glands.
3. Identify major endocrine glands.
4. Select from a list general characteristics of hormones.
5. Complete a chart on major endocrine glands, their hormones, and their functions.
6. Match other important hormones not secreted by endocrine glands to their functions.
7. List major factors which contribute to the development of diabetes mellitus.
8. Match symptoms of diabetes mellitus to the correct definitions.
9. Distinguish between symptoms or signs of diabetic coma and insulin shock.
10. Demonstrate the ability to:
    a. Perform Clinitest.
    b. Perform indicator tape test for sugar in urine.
    c. Perform acetest.

ENDOCRINE SYSTEM
UNIT XIV

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

  A. Provide students with objective sheet.

  B. Provide students with information and job sheets.

  C. Make transparencies.

  D. Discuss unit and specific objectives.

  E. Discuss information and job sheets.

  F. Provide time and materials to complete job sheets.

  (NOTE: To demonstrate Job Sheet #1, a highly-sugared soft drink or corn syrup in water can be used to obtain high positive results.)

  G. Elaborate on secreted hormones.

  H. Obtain animal endocrine organs to demonstrate anatomy.

  Examples: Kidneys (adrenal glands), pancreas

  I. Give test.

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

  C. Transparency masters

    1. TM 1--Endocrine System

    2. TM 2--Endocrine Relationships

  D. Job sheets

    1. Job Sheet #1--Perform Clinitest

    2. Job Sheet #2--Perform Indicator Tape Test for Sugar in Urine

    3. Job Sheet #3--Perform Acetest

E. Test

F. Answers to test

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study*. Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

B. Sloan, Jamee. *Medical Assistant*. Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1981.

C. Jacob, Stanley; Francone, Clarice; and Lossow, Walter. *Structure and Function in Man*. Philadelphia: W.B. Saunders Company, 1978.

IV. Additional materials:

A. Film--*The Endocrine Glands*. Available from the American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

B. Filmstrips:

1. *The Endocrine System*. Robert J. Brady Company, Subsidiary of Prentice-Hall, Inc., Routes 197 and 450, Bowie, Maryland 20715.

   (NOTE: The following filmstrips are available from Trainex Corporation, Box 116, Garden Grove, California 92642.)

2. *This is Diabetes*.

3. *Clinical Endocrinology*.

   (NOTE: This film shows and discusses conditions caused from over- or under-secretion of the endocrine glands.)

4. *Testing the Urine for Glucose and Ketones*.

ENDOCRINE SYSTEM
UNIT XIV

INFORMATION SHEET

I. Terms associated with the endocrine system

A. Diabetes insipidus--Metabolic disorder of the pituitary gland characterized by intense thirst and excretion of large amounts of urine

B. Diabetes mellitus--Disorder of carbohydrate metabolism characterized by hyperglycemia and glycosuria

(NOTE: Diabetes mellitus is usually caused by malfunction of the pancreas that results in limited or no secretion of insulin. It may also be a result of malfunctions of other endocrine glands.)

C. Endocrine glands--Ductless glands that internally secrete directly into the blood which transports secretions throughout the body

Example: Thyroid gland secretes thyroxin directly into the bloodstream

D. Endocrinology--Study of the endocrine system

(NOTE: *Endocrino* refers to "secrete within.")

E. Exocrine glands--Glands whose secretions reach the external epithelial surface either directly or through a duct

Examples: Sweat glands; glands that secrete digestive juices into the digestive tract, which leads outside the body

F. Hormone--Internal secretion of a gland or an organ which regulates a body function

G. Hypersecretion--Excessive secretion

H. Hyposecretion--Inadequate secretion

I. Malfunction--Failure to operate in normal or usual manner

J. Steroid--Organic compound derived from fats

K. Tetany--Disturbed calcium metabolism resulting in intermittent muscle spasm of the extremities

(NOTE: Tetany must not be confused with tetanus, which is an acute, infectious disease-producing toxin that causes persistent spasm of the voluntary muscles.)

L. Synergistic relationship--Harmonious action of two hormones producing a response greater than the total effect of each hormone operating by itself

INFORMATION SHEET

- M. Permissive relationship--Situation in which presence of one hormone is essential for the action of another
- N. Anorexia--Loss of appetite
- O. Diaphoresis--Profuse sweating

II. Fundamental facts about endocrine glands

- A. Are located in widely separated parts of the body
- B. Are closely related to the nervous system in regulatory action

  (NOTE: The regulatory actions of the nervous and the endocrine systems differ in the speed and duration of response. Nerve action usually occurs in a fraction of a second and lasts only as long as the stimulation is present. Endocrine action is slower and produces a more prolonged stimulation and regulation.)
- C. Are very vascular and often present a bleeding problem in surgery
- D. Have interrelated actions; hormones from one gland act upon another gland
- E. Are composed of epithelial and connective tissue

III. Major endocrine glands (Transparency 1)

- A. Pineal body
- B. Pituitary
- C. Parathyroids
- D. Thyroid
- E. Thymus
- F. Adrenals (Suprarenals)
- G. Pancreas

  (NOTE: Pancreatic Islets of Langerhans contain three cell types: alpha, beta, and delta. The beta cells of the islets form insulin and the alpha cells form glucagon. The function of the delta cells is unknown.)
- H. Ovaries

  (NOTE: During pregnancy the female produces progesterone, estrogen, and human chorionic gonadotropic hormone (HCG) or CETH from the placenta, an organ that provides nutrition, respiration, and excretion to fetus.)
- I. Testes

INFORMATION SHEET

IV. General characteristics of hormones

A. Concentration of one hormone may influence concentration of other hormones

B. Hormones have a profound effect upon growth, development, and personality of an individual

C. Most hormones are steroids or proteins and have specific functions

V. Major endocrine glands, their hormones, and their functions (Transparency 2)

GLAND	HORMONE	FUNCTION
Pituitary	TSH (thyroid stimulating hormone), ACTH (adrenocorticotropic hormone), FSH (follicle stimulating hormone), LH (luteinizing hormone), ADH (antidiuretic hormone), oxytocin, prolactin, and somatotrophic hormone	Controls other glands; stimulates growth
Thyroid	Thyroxin	Controls rate of metabolism
Parathyroid	Parathormone	Regulates calcium and phosphorous metabolism
Pancreas	Insulin from Islands of Langerhans	Essential for utilization of glucose
Ovaries	Estrogen and progesterone	Development and maintenance of female reproductive organs
Testes	Testosterone	Development and maintenance of male reproductive organs
Adrenal medulla	Adrenalin	Prepares body for fight or flight
Adrenal cortex	Corticoids	Aids body in coping with stress or infection
Thymus	Prothymocites	Aids newborn in developing immunities

INFORMATION SHEET

VI. Other important hormones not secreted by endocrine glands

- A. Estrogen and progesterone--Produced by placenta during pregnancy to nourish the lining of the uterus and placenta
- B. Gastrin--Produced by the stomach wall; stimulates secretions of the gastric glands
- C. Secretin--Produced by the small intestine; stimulates pancreatic juices
- D. Villikinin--Produced by the small intestine; stimulates movements of the intestinal villi

VII. Major factors which contribute to the development of diabetes mellitus

- A. Inability to produce insulin due to injury, disease, or tumor
- B. Insulin shortage due to overeating
- C. Aging
- D. Familial tendency

VIII. Symptoms of diabetes mellitus (Job Sheets #1, #2, and #3)

(NOTE: Other disorders affect the endocrine system, but diabetes is very prevalent today and is common to all ages.)

- A. Polyuria--Excessive amount of urine excreted over a period of time
- B. Polydipsia--Excessive thirst
- C. Polyphagia--Excessive craving for food
- D. Glycosuria--Presence of abnormal amount of glucose in urine
- E. Hyperglycemia--Abnormal amount of sugar in blood

IX. Symptoms or signs of diabetic coma and insulin shock

- A. Diabetic coma

  (NOTE: Diabetic coma results from a lack of insulin, resulting in an overload of carbohydrate, fat, and protein. This causes dehydration and electrolyte imbalance.)

  1. Restlessness
  2. Thirst
  3. Drowsiness

INFORMATION SHEET

4. Fruity, sweet-smelling breath
5. Abdominal pain
6. Anorexia and vomiting
7. Rapid, weak pulse and low blood pressure
8. Deep, fast, and labored respirations (Kusshmaul)
9. Hot, dry, and flushed skin
10. Muscle aches
11. Coma

    (NOTE: If patient is in diabetic coma, some form of insulin will be given, usually IV.)

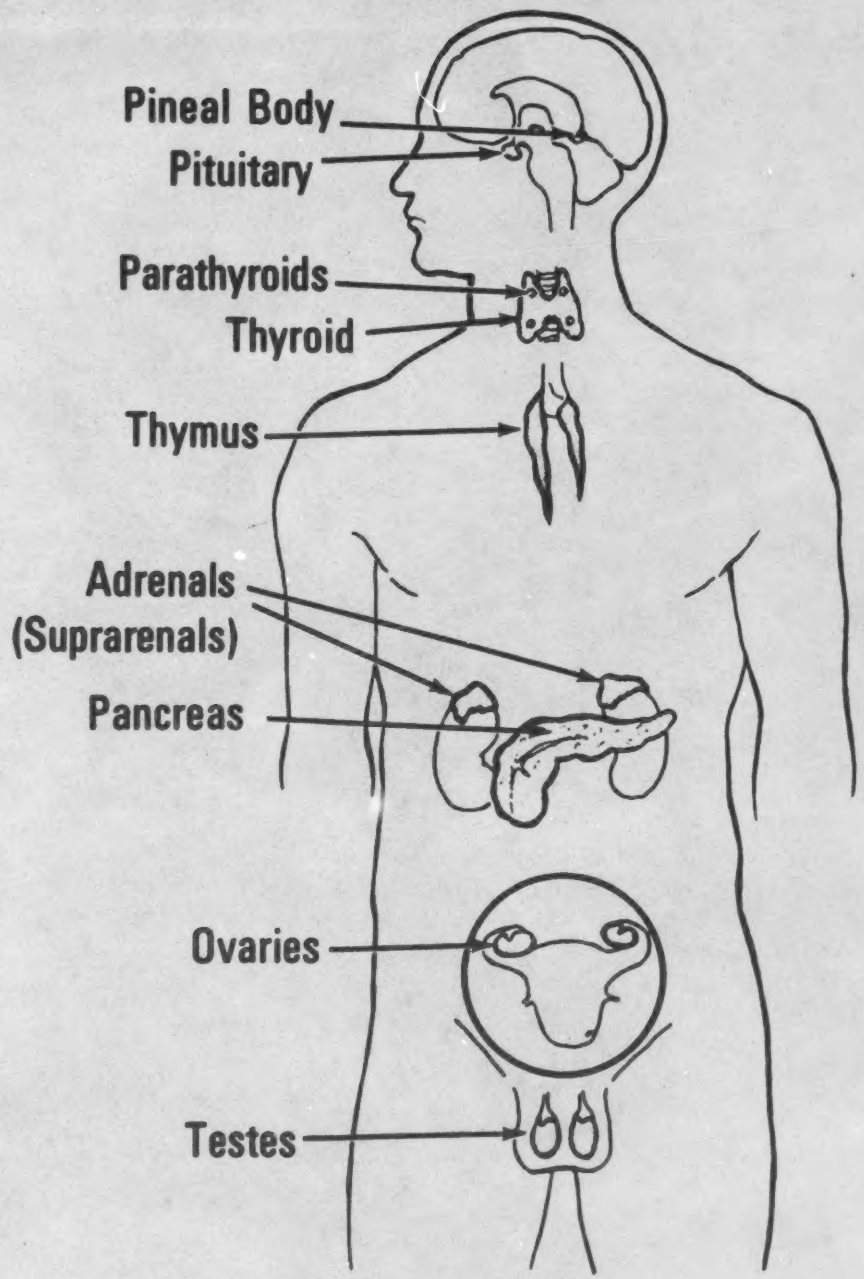
B. Insulin shock

(NOTE: Excessive insulin lowers blood sugar.)

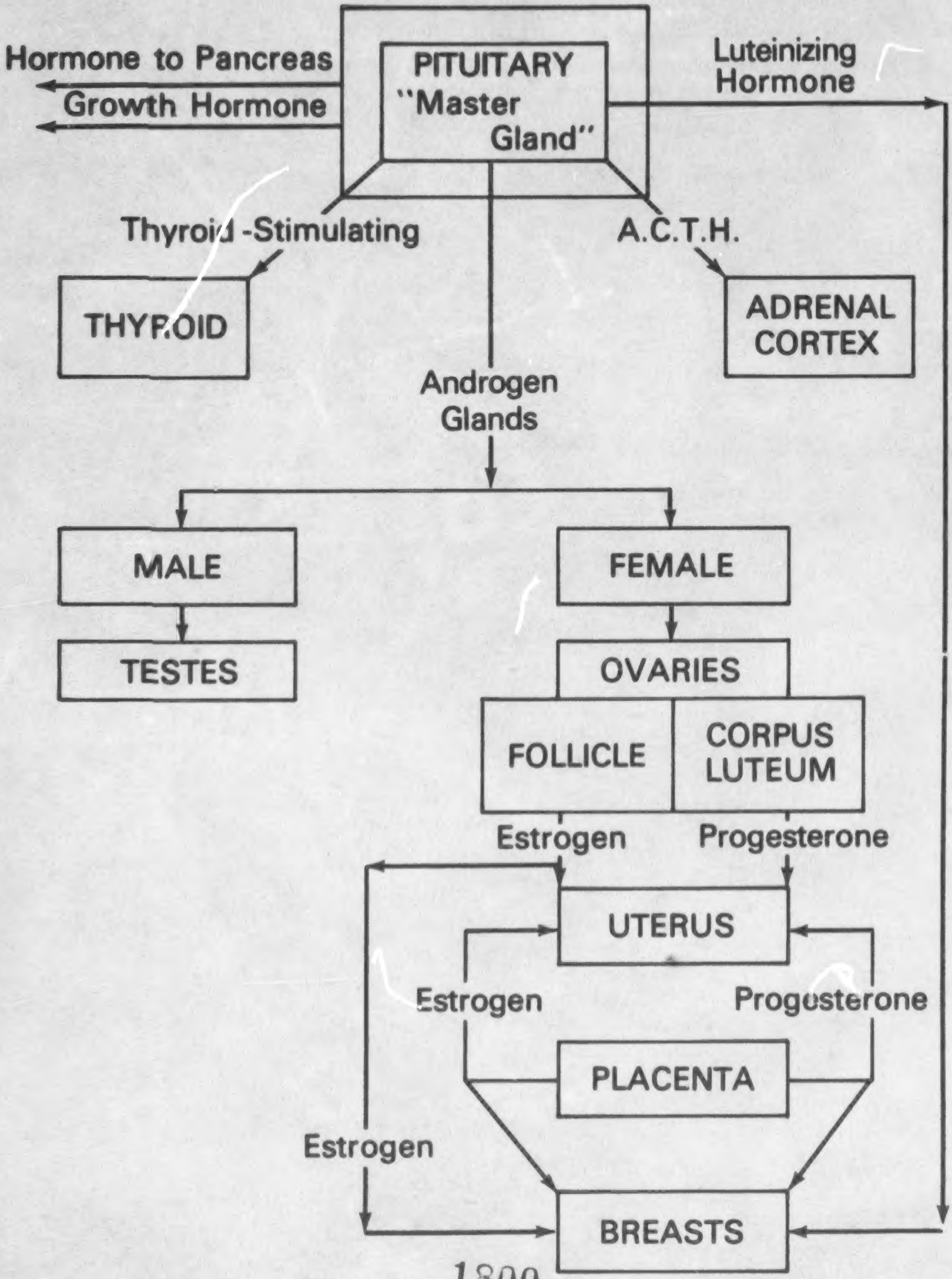
1. Headache
2. Nervousness
3. Hunger
4. Faintness
5. Diaphoresis
6. Cool, moist, and pale skin
7. Irrational behavior
8. Convulsions

    (NOTE: Insulin shock is treated in the first stages by giving some sort of oral glucose, such as hard candy, orange juice, or a sweetened soft drink. If patient is very ill, IV glucose can be given.)

Endocrine System


Pineal Body
Pituitary
Parathyroids
Thyroid
Thymus
Adrenals
(Suprarenals)
Pancreas
Ovaries
Testes

Endocrine Relationships


Hormone to Pancreas
Growth Hormone
PITUITARY
"Master Gland"
Luteinizing Hormone
Thyroid -Stimulating
A.C.T.H.
THYROID
ADRENAL CORTEX
Androgen Glands
MALE
FEMALE
TESTES
OVARIES
FOLLICLE
CORPUS LUTEUM
Estrogen
Progesterone
UTERUS
Estrogen
Progesterone
PLACENTA
Estrogen
BREASTS

ENDOCRINE SYSTEM
UNIT XIV

JOB SHEET #1--PERFORM CLINITEST

I. Equipment

A. Clinitest tablets

B. Test tube

C. Eyedropper

D. Color chart

(NOTE: Pamphlet is usually supplied with tablets.)

E. Urine specimen container

F. Urine specimen

II. Procedure

A. Wash hands

B. Identify patient and explain procedure

C. Provide privacy

D. Obtain mid-stream urine specimen

(NOTE: The Clinitest is done four times a day, before meals and before bedtime, unless physician's orders differ. If possible, have patient void, discard, and then get second voiding for testing.)

E. Take specimen to appropriate area

F. Assemble test tube, Clinitest tablet, and eyedropper on table surface near running water

G. Hold test tube approximately 1 1/4" (30 mm) from the top of the tube with test tube holder or between thumb and forefinger; with the other hand, draw up five drops of urine with the eyedropper

(CAUTION: Extreme accuracy is necessary; drop the urine into the center of the test tube.)

H. Rinse eyedropper in running water

I. Draw 10 drops of water into eyedropper and add to urine in test tube

J. Remove one Clinitest tablet from bottle and drop it into the test tube

(NOTE: Do not use tablets which are moist or have changed color. Drop one tablet into lid of bottle, then drop into test tube. Do NOT use fingers.)

JOB SHEET #1

K. Continue to hold test tube at top

(**CAUTION**: The dissolving tablet causes a boiling reaction, and the bottom of the test tube will become hot.)

L. Watch while boiling reaction takes place

(NOTE: Do NOT shake test tube while boiling or for 15 seconds after boiling has stopped.)

M. Shake tube gently after 15 seconds or after boiling stops; compare with Clinitest color chart; ignore any sediment in bottom of tube and any changes that take place after the 15-second waiting period

N. Record readings on patient's chart and report findings to appropriate person

(NOTE: Reactions are negative or positive. If fluid is blue, there is no sugar present and the test is considered negative. If fluid changes in color from dark green to orange, the test is positive. Check the color change in test tube with the block on the color chart indicating the degree of sugar content. At the recommendation of the American Diabetes Association the plus system formerly used for reporting levels has been deleted. The chart will be shown as follows:

Blue	Green	Forest Green	Brownish Green	Brown	Orange
Negative	1/4%	1/2%	3/4%	1%	2%

The dosage of insulin prescribed for a diabetic patient will be based on the amount of sugar in the urine.)

O. Clean work area

JOB SHEET #1

III. Checklist for performing Clinitest

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ____________________		
B. Washed hands correctly	☐	☐
Comments: ____________________		
C. Identified patient, explained procedure, and provided privacy	☐	☐
Comments: ____________________		
D. Obtained mid-stream urine specimen correctly	☐	☐
Comments: ____________________		
E. Took specimen to appropriate area	☐	☐
Comments: ____________________		

JOB SHEET #1

	Performed well	Needs improvement
F. Assembled test tube, Clinitest tablet, and eyedropper properly on table surface near running water	☐	☐
Comments: ______________________________		
G. Held test tube approximately 1 1/4" (30 mm) from the top of the tube with test tube holder or between thumb and forefinger; with the other hand, drew up five drops of urine with eyedropper	☐	☐
Comments: ______________________________		
H. Rinsed eyedropper properly in running water	☐	☐
Comments: ______________________________		
I. Drew 10 drops of water into eyedropper and added to urine in test tube	☐	☐
Comments: ______________________________		

JOB SHEET #1

		Performed well	Needs improvement
J.	Removed one Clinitest tablet from bottle and dropped into test tube correctly	☐	☐
	Comments: ______________________		
K.	Continued to hold test tube at top and watched correctly while boiling reaction took place	☐	☐
	Comments: ______________________		
L.	Shook tube after 15 seconds or after boiling stopped; compared with Clinitest color chart; ignored any sediment in bottom of tube and any changes that took place after the 15-second waiting period	☐	☐
	Comments: ______________________		
M.	Recorded reading correctly on patient's chart and reported findings to appropriate person	☐	☐
	Comments: ______________________		
N.	Cleaned work area correctly	☐	☐
	Comments: ______________________		

ENDOCRINE SYSTEM
UNIT XIV

JOB SHEET #2--PERFORM INDICATOR TAPE TEST FOR SUGAR IN URINE

I. Equipment

A. Indicator tape strip

(NOTE: There are several brands of indicator strips. Be sure to follow instructions for use.)

B. Urine specimen container

C. Urine specimen

D. Color chart on indicator tape dispenser

II. Procedure

A. Wash hands

B. Identify patient and explain procedure

C. Provide privacy

D. Obtain urine specimen; use second voided specimen, if possible

E. Take specimen to laboratory area

F. Withdraw 1 1/2 inch (3.81 cm) of indicator tape from dispenser

(NOTE: Do not use tape if it has turned brown.)

G. Dip distal end of tape into urine and remove immediately after it has been uniformly moistened

H. Wait one minute

(NOTE: Use second hand on watch to time test.)

I. Compare tape with color chart on exterior of dispenser

J. Clean work area

K. Record findings on appropriate form

(NOTE: Usual color designations are yellow, indicating zero percent, and varying shades of green, ranging from light to dark, indicating the approximate glucose concentration.)

JOB SHEET #2

L. Report findings immediately to appropriate person

(NOTE: Patients taking certain medication may need to have their urine tested only with the indicator tape method because others will be inaccurate.)

JOB SHEET #2

III. Checklist for performing indicator tape test for sugar in urine

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
B. Washed hands correctly	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
C. Identified patient, explained procedure, and provided privacy	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
D. Obtained urine specimen; used second voided specimen, if possible	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
E. Took specimen to laboratory area	☐	☐

Comments: ____________________

____

____

JOB SHEET #2

		Performed well	Needs improvement
F.	Withdrew 1 1/2" (3.81 cm) of indicator tape from dispenser	☐	☐
	Comments: ______________________________		
G.	Dipped distal end of tape into urine and removed immediately after it had been uniformly moistened; waited one minute	☐	☐
	Comments: ______________________________		
H.	Compared tape with color chart on exterior of dispenser	☐	☐
	Comments: ______________________________		
I.	Cleaned work area properly	☐	☐
	Comments: ______________________________		
J.	Recorded findings properly on appropriate form	☐	☐
	Comments: ______________________________		
K.	Reported findings immediately to appropriate person	☐	☐
	Comments: ______________________________		

ENDOCRINE SYSTEM
UNIT XIV

JOB SHEET #3--PERFORM ACETEST

I. Equipment

A. Acetest tablet

B. Urine specimen container

C. Urine specimen

D. Clean, dry, white paper

E. Eyedropper

F. Color chart

II. Procedure

A. Wash hands

B. Identify patient and explain procedure

C. Provide privacy

D. Obtain urine specimen

E. Take specimen to appropriate area

F. Place clean, dry, white paper on flat, dry surface

G. Place one tablet on paper; do not touch tablet or paper

(NOTE: Drop one tablet into lid of bottle; then drop onto paper.)

H. Draw urine up in eyedropper

I. Drop one drop on tablet

J. Wait exactly 30 seconds

K. Compare color of the tablet with color chart on bottle

(NOTE: Reactions are negative or positive. If color is unchanged or tablet becomes cream colored, the test is considered negative. If tablet turns from lavender to a deep purple, the test is considered positive. Color designations are as follows: lavender indicates a small amount of acetone; medium purple indicates a moderate amount of acetone; dark purple indicates a large amount of acetone.)

L. Record finding on appropriate form

M. Report finding to appropriate person

JOB SHEET #3

III. Checklist for performing acetest

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
B. Washed hands correctly	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
C. Identified patient, explained procedure, and provided privacy	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
D. Obtained urine specimen properly and took specimen to appropriate area	☐	☐
Comments: ______________________________ ______________________________ ______________________________		
E. Placed clean, dry, white paper on flat, dry surface	☐	☐
Comments: ______________________________ ______________________________ ______________________________		

JOB SHEET #3

		Performed well	Needs improvement
F.	Placed one tablet on paper; did not touch tablet or paper	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
G.	Drew urine up in eyedropper correctly	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
H.	Dropped one drop on tablet, waited exactly 30 seconds	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
I.	Compared color of the tablet with color chart on bottle	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
J.	Recorded finding on appropriate form correctly	☐	☐

Comments: ______________________________

____

____

JOB SHEET #3

	Performed well	Needs improvement
K. Reported finding to appropriate person	☐	☐

Comments: ______________________________

____

____

ENDOCRINE SYSTEM
UNIT XIV

TEST

NAME______________________________ SCORE ______________

1. Match terms associated with the endocrine system to their definitions. Write the correct numbers in the blanks.

______a. Glands whose secretions reach the external epithelial surface either directly or through a duct

______b. Ductless glands that internally secrete directly into the blood which transports secretions throughout the body

______c. Failure to operate in normal or usual manner

______d. Excessive secretion

______e. Disturbed calcium metabolism resulting in intermittent muscle spasm of the extremities

______f. Study of the endocrine system

______g. Disorder of carbohydrate metabolism characterized by hyperglycemia and glycosuria

______h. Metabolic disorder of the pituitary gland characterized by intense thirst and excretion of large amounts of urine

______i. Internal secretion of a gland or an organ which regulates a body function

______j. Inadequate secretion

______k. Organic compound derived from fats

______l. Situation in which presence of one hormone is essential for the action of another

______m. Harmonious action of two hormones producing a response greater than the total effect of each hormone operating by itself

______n. Loss of appetite

______o. Profuse sweating

1. Steroid
2. Hyposecretion
3. Hormone
4. Diabetes insipidus
5. Diabetes mellitus
6. Endocrinology
7. Tetany
8. Hypersecretion
9. Malfunction
10. Endocrine glands
11. Exocrine glands
12. Permissive relationship
13. Synergistic relationship
14. Anorexia
15. Diaphoresis

2. Select from the following list fundamental facts about endocrine glands. Write an "X" in the correct blanks.

______a. Are mainly controlled by the hypothalamus

______b. Have interrelated actions; hormones from one gland act upon another gland

______c. Are located in widely separated parts of the body

______d. Determine sexual orientation

______e. Are very vascular and often present a bleeding problem in surgery

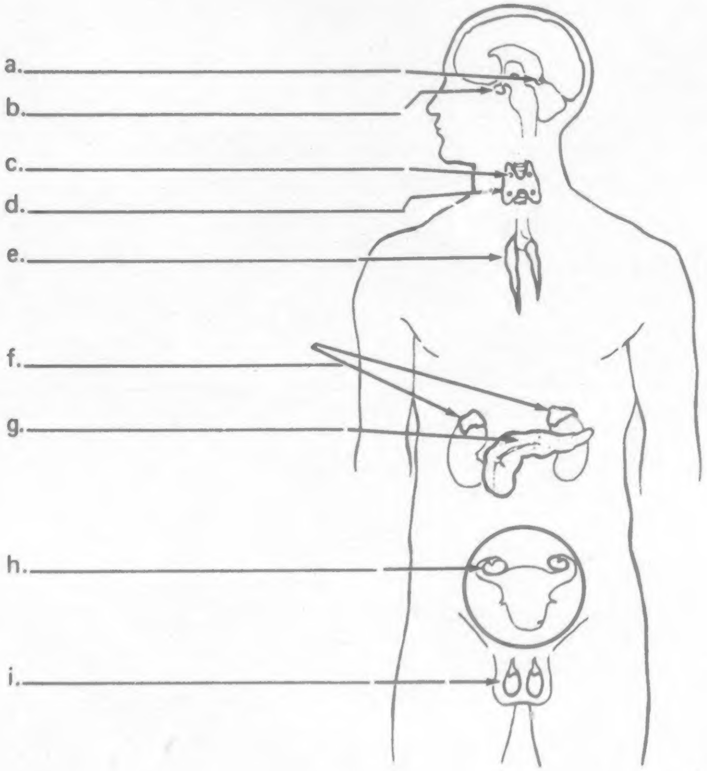
______f. Are composed of smooth muscle tissue

______g. Are composed of epithelial and connective tissue

______h. Are closely related to the nervous system in regulatory action

3. Identify major endocrine glands. Write the correct names in the blanks.

Pancreas
Thymus
Testes
Thyroid
Pituitary
Ovaries
Pineal body
Parathyroids
Adrenals (Suprarenals)



4. Select from the following list general characteristics of hormones. Write an "X" in the correct blanks.

_____a. Most hormones are steroids or proteins and have specific functions

_____b. Each hormone works independently of the others

_____c. Concentration of one hormone may influence concentration of other hormones

_____d. Hormones have a profound effect upon growth, development, and personality of an individual

_____e. Hormones are fat-soluble

_____f. Hormones control hemorrhage

5. Complete the following chart on major endocrine glands, their hormones, and their functions.

GLAND	HORMONE	FUNCTION
a. __________	TSH (thyroid stimulating hormone), ACTH (adrenocorticotropic hormone), FSH (follicle stimulating hormone), LH (luteinizing hormone), ADH (antidiuretic hormone), oxytocin, prolactin, and somatotrophic hormone	Controls other glands; stimulates growth
Thyroid	b. __________	Controls rate of metabolism
Parathyroid	Parathormone	c. __________ __________
Pancreas	d. __________ __________	Essential for utilization of glucose
Ovaries	e. __________	Development and maintenance of female reproductive organs
Testes	f. __________	Development and maintenance of male reproductive organs
g. __________	Adrenalin	Prepares body for fight or flight

Adrenal cortex	Corticoids	h. ____________________ ____________________
i. __________	Prothymocites	Aides newborn in developing immunities

6. Match other important hormones not secreted by endocrine glands to their functions. Write the correct numbers in the blanks.

_____a. Produced by the small intestine; stimulates pancreatic juices	1. Villikinin
_____b. Produced by placenta during pregnancy to nourish the lining of the uterus and placenta	2. Estrogen and progesterone
_____c. Produced by the small intestine; stimulates movements of the intestinal villi	3. Secretin
_____d. Produced by the stomach wall; stimulates secretions of the gastric glands	4. Gastrin

7. List major factors which contribute to the development of diabetes mellitus.

a. ____

b. ____

c. ____

d. ____

8. Match symptoms of diabetes mellitus to their definitions. Write the correct numbers in the blanks.

_____a. Presence of abnormal amount of glucose in urine	1. Hyperglycemia
_____b. Excessive thirst	2. Polyphagia
_____c. Excessive amount of urine excreted over a period of time	3. Glycosuria
_____d. Excessive craving for food	4. Polydipsia
_____e. Abnormal amount of sugar in blood	5. Polyuria

9. Distinguish between symptoms or signs of diabetic coma and insulin shock. Write a "C" before characteristics of diabetic coma and an "S" before characteristics of insulin shock.

______a. Faintness

______b. Thirst

______c. Hot, dry, and flushed skin

______d. Abdominal pain

______e. Anorexia and vomiting

______f. Nervousness

______g. Cool, moist, and pale skin

______h. Restlessness

______i. Headache

______j. Deep, fast, and labored respirations (Kusshmaul)

______k. Diaphoresis

______l. Irrational behavior

______m. Coma

______n. Hunger

______o. Rapid, weak pulse and low blood pressure

______p. Convulsions

______q. Drowsiness

______r. Fruity, sweet-smelling breath

10. Demonstrate the ability to:

    a. Perform Clinitest.

    b. Perform indicator tape test for sugar in urine.

    c. Perform acetest.

    (NOTE: If activity 10 has not been finished before the test, ask your instructor when it should be completed.)

ENDOCRINE SYSTEM
UNIT XIV

ANSWERS TO TEST

1. a. 11
   b. 10
   c. 9
   d. 8
   e. 7
   f. 6
   g. 5
   h. 4
   i. 3
   j. 2
   k. 1
   l. 12
   m. 13
   n. 14
   o. 15
2. b, c, e, g, h
3. a. Pineal body
   b. Pituitary
   c. Parathyroids
   d. Thyroid
   e. Thymus
   f. Adrenals (Suprarenals)
   g. Pancreas
   h. Ovaries
   i. Testes
4. a, c, d
5. a. Pituitary
   b. Thyroxin
   c. Regulates calcium and phosphorous metabolism
   d. Insulin from Islands of Langerhans
   e. Estrogen and progesterone
   f. Testosterone
   g. Adrenal medulla
   h. Aids body in coping with stress or infection
   i. Thymus

6. a. 3
   b. 2
   c. 1
   d. 4

7. a. Inability to produce insulin due to injury, disease, or tumor
   b. Insulin shortage due to overeating
   c. Aging
   d. Familial tendency

8. a. 3
   b. 4
   c. 5
   d. 2
   e. 1

9. a. S
   b. C
   c. C
   d. C
   e. C
   f. S
   g. S
   h. C
   i. S
   j. C
   k. S
   l. S
   m. C
   n. S
   o. C
   p. S
   q. C
   r. C

10. Performance skills evaluated to the satisfaction of the instructor

REPRODUCTIVE SYSTEM
UNIT XV

UNIT OBJECTIVE

After completion of this unit, the student should be able to use information concerning the reproductive system to be more effective and knowledgeable in patient care, in providing treatment, and in patient education. This knowledge will be evidenced by completion of assignment sheet, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the reproductive system to the correct definitions.
2. Name functions of the male and female reproductive systems.
3. Describe secondary sex characteristics in males and females.
4. Identify parts of the male reproductive system and adjacent structures.
5. Match male external and internal reproductive organs to the correct functions.
6. Identify parts of the female reproductive system and adjacent structures.
7. Match female external and internal reproductive organs to the correct functions.
8. Match stages of the 28-day menstrual cycle to the correct descriptions.
9. Match common problems that can occur in menstruation to the correct definitions.
10. Describe physiological changes that occur during menopause.
11. Complete a chart on advantages, disadvantages, and effectiveness of types of birth control.
12. List reasons for vaginal douches and perineal care.
13. React to a current issue dealing with the reproductive system.
14. Demonstrate the ability to:
    a. Assist with a pelvic exam and pap smear.
    b. Teach self-examination of breasts.
    c. Give a vaginal douche.
    d. Give perineal care.

REPRODUCTIVE SYSTEM
UNIT XV

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

  A. Provide students with objective sheet.

  B. Provide students with information sheet.

  C. Make transparencies.

  D. Discuss information sheet.

  E. Demonstrate anatomy using models.

  F. Provide students with assignment sheet and discuss assignment sheet.

  G. Provide students with job sheets.

  H. Demonstrate and discuss procedures outlined in job sheets.

  I. Obtain birth control devices, breast models, and pamphlets from companies who offer these products to use for discussion and demonstration.

  J. Call or write your state or national cancer society office for films and resource materials.

  (NOTE: Write to the American Cancer Society at 777 Third Avenue, New York, New York 10017.)

  K. Give test.

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

  C. Transparency masters

    1. TM 1--Ovum and Spermatozoa

    2. TM 2--Male Reproductive System

    3. TM 3--Female Reproductive System: External Organs

    4. TM 4--Female Reproductive System: Internal Organs

    5. TM 5--Female Reproductive System

6. TM 6--The Breast

7. TM 7--The Menstrual Cycle

D. Assignment Sheet #1--React to a Current Issue Dealing with the Reproductive System

E. Job sheets

1. Job Sheet #1--Assist With a Pelvic Exam and Pap Smear

2. Job Sheet #2--Teach Self-Examination of Breasts

3. Job Sheet #3--Give a Vaginal Douche

4. Job Sheet #4--Give Perineal Care

III. Unit references:

A. Rogers, Helen. *Nursing I: A Course of Study.* Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

B. Sloan, Jamee. *Medical Assistant.* Stillwater, Oklahoma: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1981.

C. Memmler, Ruth, and Wood, Dean Lin. *The Human Body in Health and Diease.* Philadelphia: J.B. Lippincott Company, 1977.

IV. Additional materials:

A. Films--*Female Cycle.* Color, 18 min., Films Incorporated, 1972. Available from Films Incorporated, 733 Greenbay Road, Wilmette, Illinois 60091.

B. Filmstrips:

(NOTE: The following filmstrips are available from Trainex Corporation, Box 116, Garden Grove, California 92642.)

1. *Cancer Detection: Self-Examination of the Breast and Pap Smear.*

2. *Family Planning.*

C. Pamphlets--Rocky Mountain Planned Parenthood Publications, 1852 Vine Street, Denver, Colorado 80206.

REPRODUCTIVE SYSTEM
UNIT XV

INFORMATION SHEET

I. Terms associated with the reproductive system (Transparency 1)

  A. Broad ligament--Fold of peritoneum that supports the uterus

  B. Circumcision--Surgical removal of the prepuce

  C. Climacteric--Period that marks the cessation of the reproductive function in the female or diminishing testicular activity in the male

  D. Endometrium--Mucous membrane lining of the uterus

  E. Fertilization--Process by which the sperm unites with the ovum

  (NOTE: The union of the sperm and ovum provide 23 chromosomes.)

  F. Glans penis--Head of penis

  G. Graafian follicle--Thin-walled cavity in the ovary enclosing a developing ovum

  H. Gynecology--Study of diseases of the female reproductive system

  I. Lactiferous ducts--Ducts that convey milk

  J. Menarche--Beginning of menstruation

  K. Menopause--Normal condition when the production of the ovum ceases that results in permanent cessation of menstrual activity

  (NOTE: Menopause usually occurs between the ages of 42-54.)

  L. Menstruation--Periodic discharge of blood and tissues from the non-pregnant uterus

  M. Obstetrics--Branch of medicine that deals with management of pregnancy, labor, and delivery and post-partum

  N. Ovum--Female reproductive cell

  O. Spermatozoa--Male reproductive cell

  (NOTE: The sex of an offspring is determined by the type of sperm cell that fertilizes the egg. If the sperm carries an X-chromosome and is paired with the X-chromosome of the ovum, the combination will result in a female. If the Y-bearing sperm fertilizes the ovum, the X-Y combination will result in a male.)

  P. Perineum--Area between external genitalia and anus

INFORMATION SHEET

Q. Puberty-Period at which one becomes capable of reproduction

(NOTE: Human beings are born with a full complement of reproductive organs which grow slowly until puberty, then begin to mature.)

R. Pubic--Pertaining to the os pubis, the anterior bone of the pelvis

S. Reproduction--Process by which a living organism produces a new individual of the same kind

T. Scrotum--External pouch which contains the testes

U. Semen--Thick, white secretion of the male reproductive glands

V. Spermatic cord--Cord suspending the testes; composed of veins, arteries, lymphatics, nerves, and vas deferens

W. Gonad--Embryonic sex gland before differentiation into definitive testis or ovary

(NOTE: At puberty the gonads gradually become functional and secrete hormones that influence the development of secondary sexual characteristics.)

X. Viable--Capable of maintaining an independent existence

Y. Viscid--Thick, sticky

Z. Vulva--External female genitalia

AA. Prepuce--Foreskin or fold of skin over the glans penis in the male

II. Functions of the male and female reproductive systems

A. Perpetuation of the human species

B. Sexual gratification

C. Secretion of hormones

III. Secondary sex characteristics in males and females

A. Males

1. Characteristics appear at puberty, approximately 12-14 years of age

2. Change in musculoskeletal development with broader shoulders, narrow hips, and firmer muscles

3. Increase in activity of sudoriferous and sebaceous glands

INFORMATION SHEET

4. Growth of beard, pubic, and axillary hair with general increase of hair growth all over body
5. Change in voice to deeper tones

B. Females

1. Characteristics appear at puberty, approximately 10-12 years of age
2. Enlargement of breasts
3. Appearance of pubic and axillary hair
4. Menarche
5. Changes in body contours due to increase in growth and fatty deposits

IV. Parts of the male reproductive system and adjacent structures (Transparency 2)

A. Testis (two)

(NOTE: The plural is testes or testicles.)

B. Scrotum

C. Epididymis (two)

(NOTE: The plural is epididymides.)

D. Vas deferens

(NOTE: This is also called ductus deferens.)

E. Ejaculatory duct (two)

F. Urethra

G. Prostate gland

H. Seminal vesicles (two)

I. Bulbourethral glands (two)

J. Penis

K. Glans penis

L. Prepuce

M. Urinary bladder

N. Rectum

O. Pubic bone

INFORMATION SHEET

P. Kidney

Q. Ureter

V. Functions of the male external and internal reproductive organs

A. External male organs

1. Scrotum--Protects testes; regulates and maintains favorable temperature for sperm production
2. Testes--Produce sperm and testosterone
3. Epididymis--Collects and stores sperm while maturing; conducts sperm to outside
4. Vas deferens--Transports sperm from the testes to the urethra
5. Penis and urethra--Carry semen into vagina during copulation; carry urine from bladder

B. Internal male organs

1. Seminal vesicles--Contribute essential components to semen
2. Prostate gland--Secretes alkaline fluids which enhance sperm mobility; contracts smooth muscles to aid in ejaculation

   (NOTE: Men middle-aged and older should have the prostate gland checked periodically for enlargement and tumors. The exam is quite simple and is performed by a physician using an exam glove and lubricant. Sometimes a smear is taken for examination.)
3. Bulbourethral or Cowper's glands--Secrete viscid alkaline fluid which removes urine residue; secrete mucus for lubrication
4. Vas deferens--Transports sperm from the testes to the urethra

VI. Parts of the female reproductive system and adjacent structures (Transparencies 3, 4, 5, and 6; Job Sheets #1 and #2)

A. External organs and adjacent structures

1. Mons pubis
2. Clitoris
3. Urinary meatus
4. Labia majora
5. Labia minora

INFORMATION SHEET

    6. Vaginal orifice
    7. Hymen
    8. Vestibule
    9. Perineum
    10. Anus

B. Internal organs and adjacent structures

    1. Uterus
    2. Fallopian tubes (two)
    3. Ovaries (two)
    4. Pubic bone
    5. Cervix
    6. Vagina
    7. Urinary bladder
    8. Urethra
    9. Urinary meatus
    10. Rectum
    11. Vaginal orifice
    12. Labia majora
    13. Labia minora

C. Breast

(NOTE: Cancer of the breast is quite common in women and sometimes men. A monthly self-check of breasts may mean an early detection and treatment if cancer invades tissue.)

    1. Nipple
    2. Areola
    3. Lactiferous ducts
    4. Lobe of gland tissue
    5. Adipose tissue

INFORMATION SHEET

6. Pectoralis major

7. Ribs

VII. Functions of female external and internal reproductive organs

A. External female organs

1. Mammary glands (breasts)--Lactation (secretion of milk)

   (NOTE: Lactiferous ducts carry secretions from many lobules to one opening in nipple.)

2. Mons pubis--Protection of pubic bone

3. Labia majora--Surrounding of labia minora

4. Labia minora--Enclosing of the vestibule

5. Clitoris--Sexual excitation

6. Urethral orifice--Regulation of urine flow

7. Vaginal orifice--Opening of vagina

8. Perineum--Pelvic floor

   (NOTE: The term perineum is clinically used to mean the area between the vaginal orifice and the anus. The full use of the term, however, includes all structures between the mons pubis and the coccyx.)

B. Internal female organs

1. Vagina--Reception of the penis during copulation; passageway for the infant during birth

2. Uterus--Menstruation; during pregnancy, protection and nourishment of fertilized ovum until it becomes a viable infant

3. Fallopian tubes (two)--Movement of ova from ovaries to uterus; fertilization usually takes place in the distal third of the tube

   (NOTE: These are also known as uterine tubes or ova ducts.)

4. Ovaries (two)--Production of hormones and an ovum, usually once a month from alternate ovary

5. Bartholin's and Skene's glands--Secretion of lubricating fluid

INFORMATION SHEET

VIII. Stages of the 28-day menstrual cycle (Transparency 7)

A. Days one-five--Usually menstruation occurs, and one of the many ova enclosed in a Graafian follicle begins to mature

B. Days five-13--During this period of ovum maturation, the Graafian follicle produces estrogen under the control of the pituitary gland and the endometrium repairs and begins to thicken

C. By day 14--Ovulation occurs; Graafian follicle ruptures, and ovum is released into the abdominal cavity; fringed end of fallopian tube brings ovum into tube where it is propelled to uterus

(NOTE: If fertilization occurs, the ovum is penetrated by a sperm usually midway through the fallopian tube.)

D. Days 15-20--Corpus luteum forms, secreting progesterone; endometrium thickens

(NOTE: If fertilization does not occur, the corpus luteum and its secretions diminish; the blood supply to the endometrium decreases; and the uterine capillaries begin to bleed as the endometrium sloughs off.)

E. Days 21-28--Hormone production decreases; endometrium shrinks

IX. Common problems that can occur in menstruation

A. Dysmenorrhea--Painful or difficult menstruation

B. Amenorrhea--Absence or suppression of menstruation

C. Menorrhagia--Excessive bleeding at the time of a menstrual period, either in number of days of flow or the amount of blood, or both

D. Metrorrhagia--Bleeding from the uterus, especially at times other than during the menstrual period

X. Physiological changes that occur during menopause

A. Production of estrogen diminishes when ovaries become scar tissue as they atrophy

B. Atrophy of the uterus, fallopian tubes, vagina, and vulva occurs because of lack of estrogen

INFORMATION SHEET

XI. Advantages, disadvantages, and effectiveness of types of birth control (Assignment Sheet #1)

TYPE	ADVANTAGES	DISADVANTAGES	EFFECTIVENESS
Pill (NOTE: Many brands are on the market today.)	Easy to take; periods usually shorter with less flow	May cause nausea, weight gain, breakthrough bleeding; increased incidence of vascular disease	Approximately 95%
Diaphragm with spermicidal preparation	Not a systemic drug; no physical risks	Must be fitted by a doctor and checked periodically; must be inserted each time before intercourse and left in six-eight hours afterward; must be scrupulous in cleaning and storing	95% if used correctly with spermicidal preparation
Foam (NOTE: There are many brands on today's market.)	No prescription needed; easy to insert; no physical risk unless allergic to chemical	Must be scrupulous in cleaning applicator; must be inserted each time before intercourse	If used with a condom, 95%; without condom, 70-85%
Vaginal suppositories (NOTE: There are many brands available on today's market.)	No prescription needed; easy to insert; no physical risk unless allergic to chemical	Must be inserted each time before intercourse, must comply with time limits to allow suppository to dissolve and the amount of time spermicide lasts	If used with a condom, 95%; without condom, 85-90%

INFORMATION SHEET

TYPE	ADVANTAGES	DISADVANTAGES	EFFECTIVENESS
Condom (NOTE: Many different brands are available.)	No prescription needed; no physical risks; reduces chance of contracting venereal disease	Male must take responsibility; lack of sensitivity; must be used before intercourse	95%
IUD (Intrauterine device) (NOTE: Many forms are available.)	Does not need to be inserted each time	Has to be inserted by physician and checked periodically; infections frequently occur; causes cramping and bleeding in some women; may cause perforation of uterus	95-97%
Rhythm	No prescription needed; no physical risks	Period of ovulation is not dependable	60-80%
Withdrawal	No prescription needed; no physical risks	Unreliable because depends on man taking responsibility not to ejaculate in vagina or near pubis or thighs; may be physically and emotionally unsatisfying	10-15%
Tubal ligation	Is considered permanent	Surgical procedure under general anesthesia, with post-operative discomforts; permanent sterilization	99%
Vasectomy	Is considered permanent	Surgical procedure, but can be done under local anesthesia; may have some discomfort and swelling	99%

INFORMATION SHEET

XII. Reasons for vaginal douches and perineal care (Job Sheets #3 and #4)

A. Vaginal douches

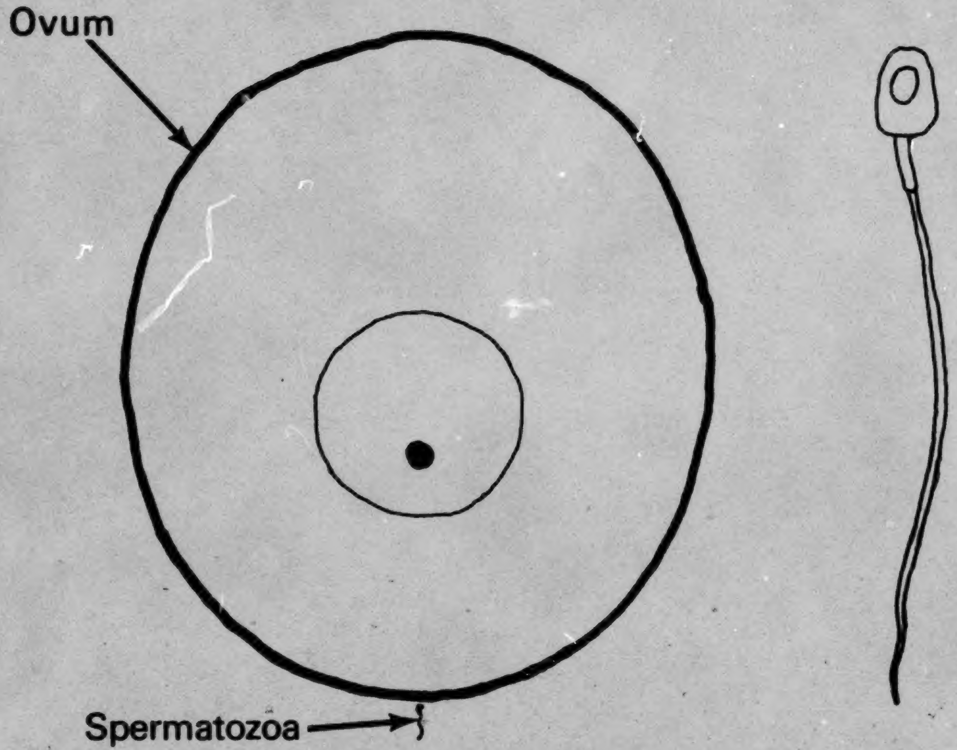
(NOTE: Douches should not be used in excess as they may alter the normal condition of the vaginal wall. They are usually not recommended except in cases where specific treatment is needed.)

1. Promote cleanliness
2. Promote circulation to perineal areas
3. Prevent cross-contamination during a surgical procedure
4. Soothe inflamed tissues using medication or other solutions

B. Perineal care

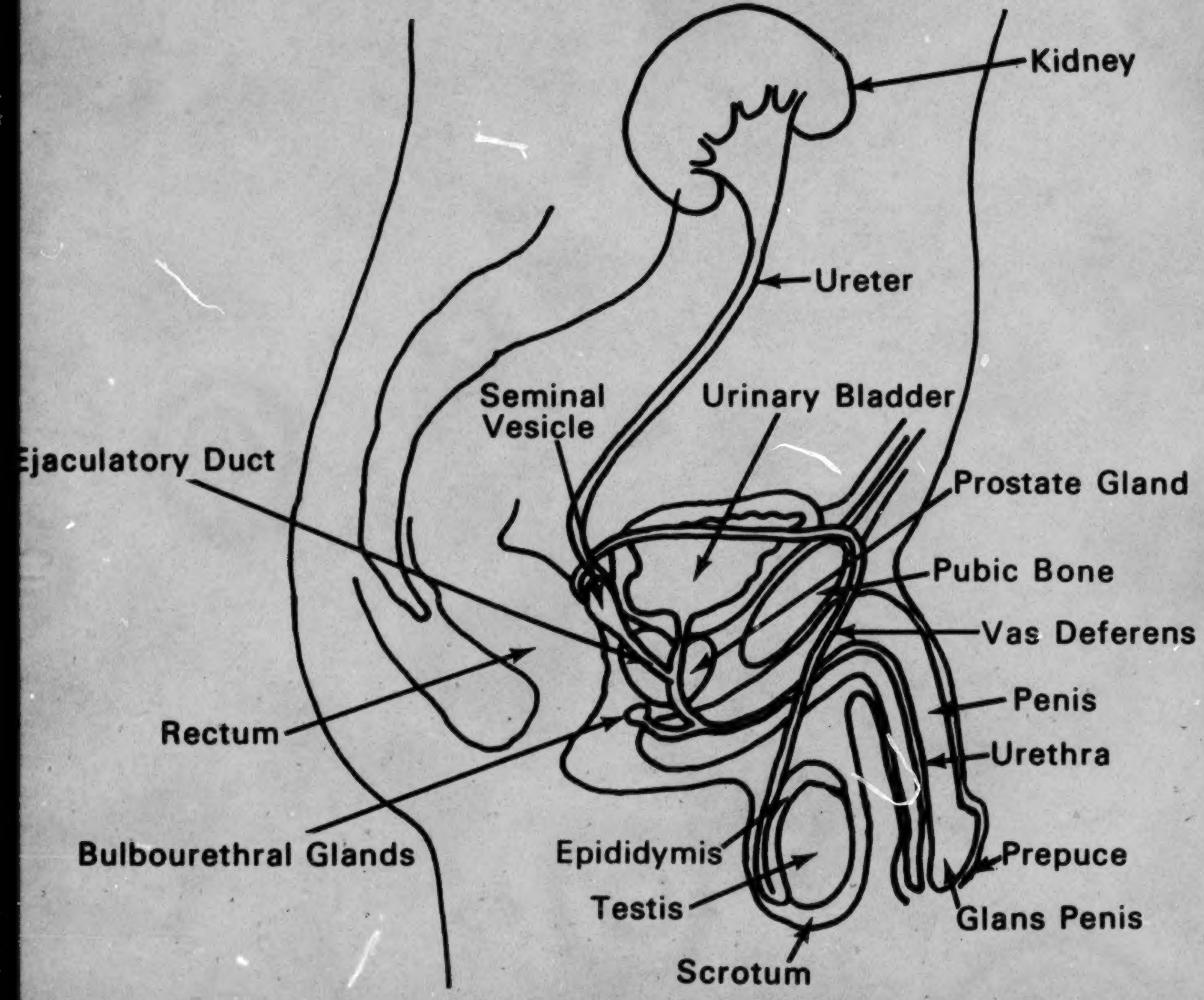
1. Helps prevent infections
2. Promotes healing of the perineal area, if affected
3. Prevents breakdown of irritated tissue in the perineal area
4. Aids in prevention of odors

Ovum and Spermatozoa


Ovum
Spermatozoa

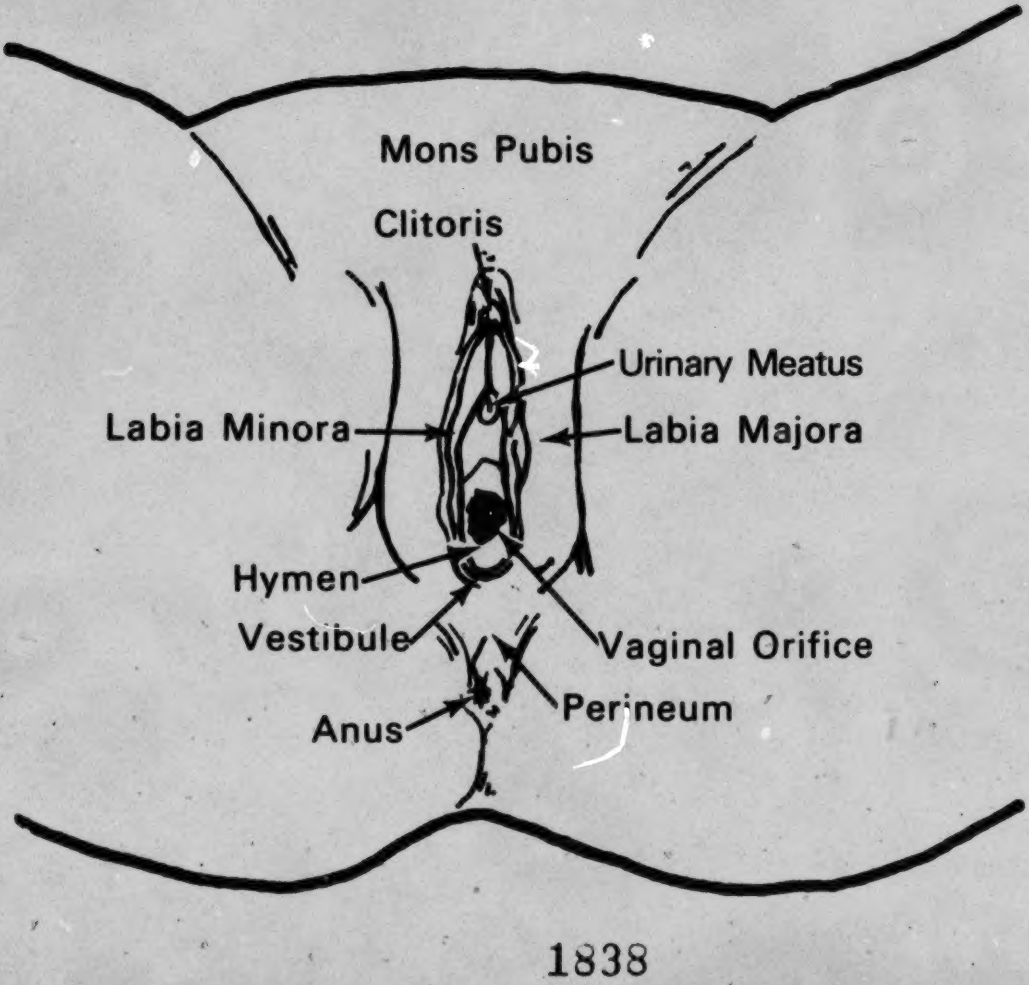
NOTE MARKED DIFFERENCE IN SIZE
OF SPERMATOZOA AND OVUM
SPERMATOZOA ON RIGHT GREATLY ENLARGED

Male Reproductive System


Kidney
Ureter
Seminal Vesicle
Urinary Bladder
jaculatory Duct
Prostate Gland
Pubic Bone
Vas Deferens
Penis
Rectum
Urethra
Bulbourethral Glands
Epididymis
Prepuce
Testis
Glans Penis
Scrotum

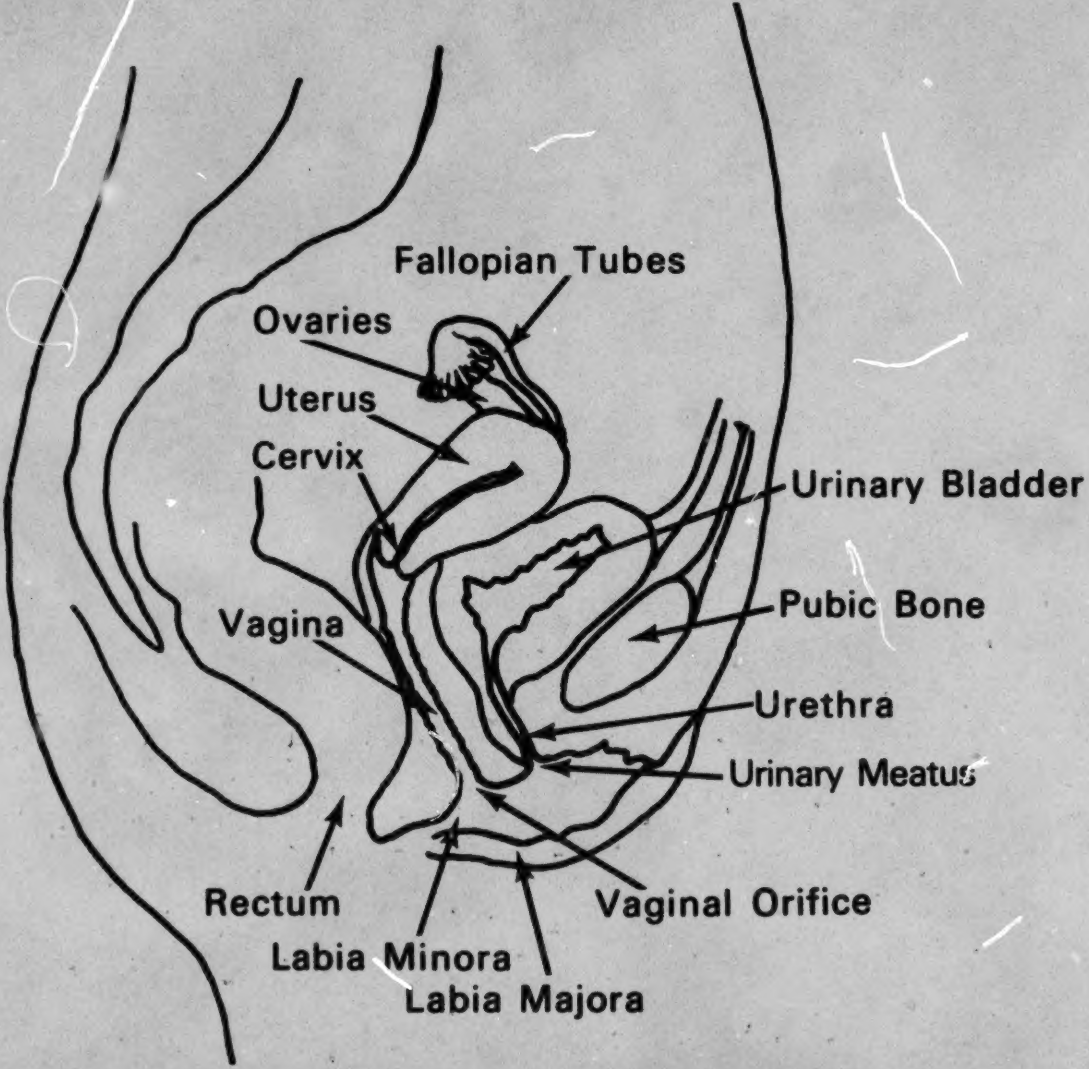
Female Reproductive System

EXTERNAL ORGANS


Mons Pubis
Clitoris
Urinary Meatus
Labia Minora
Labia Majora
Hymen
Vestibule
Vaginal Orifice
Perineum
Anus

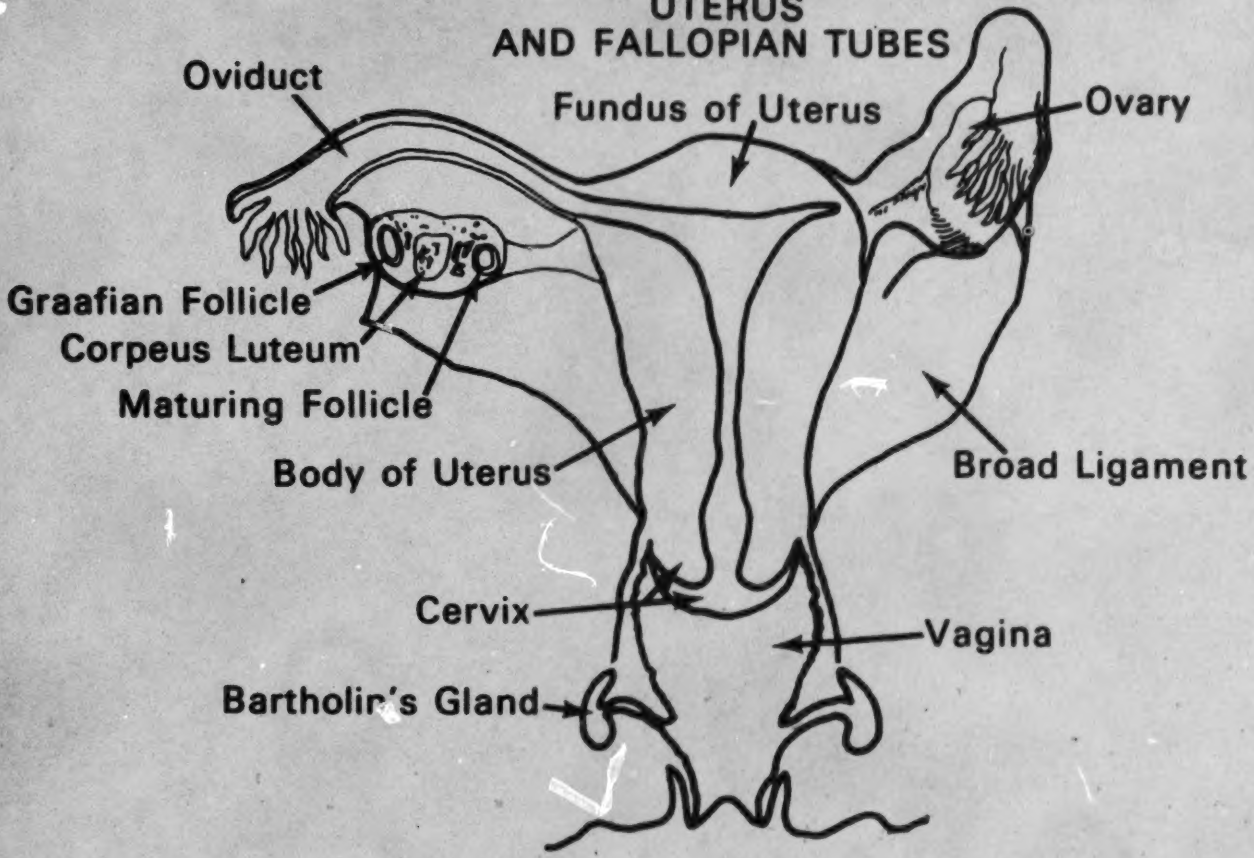
Female Reproductive System

INTERNAL ORGANS

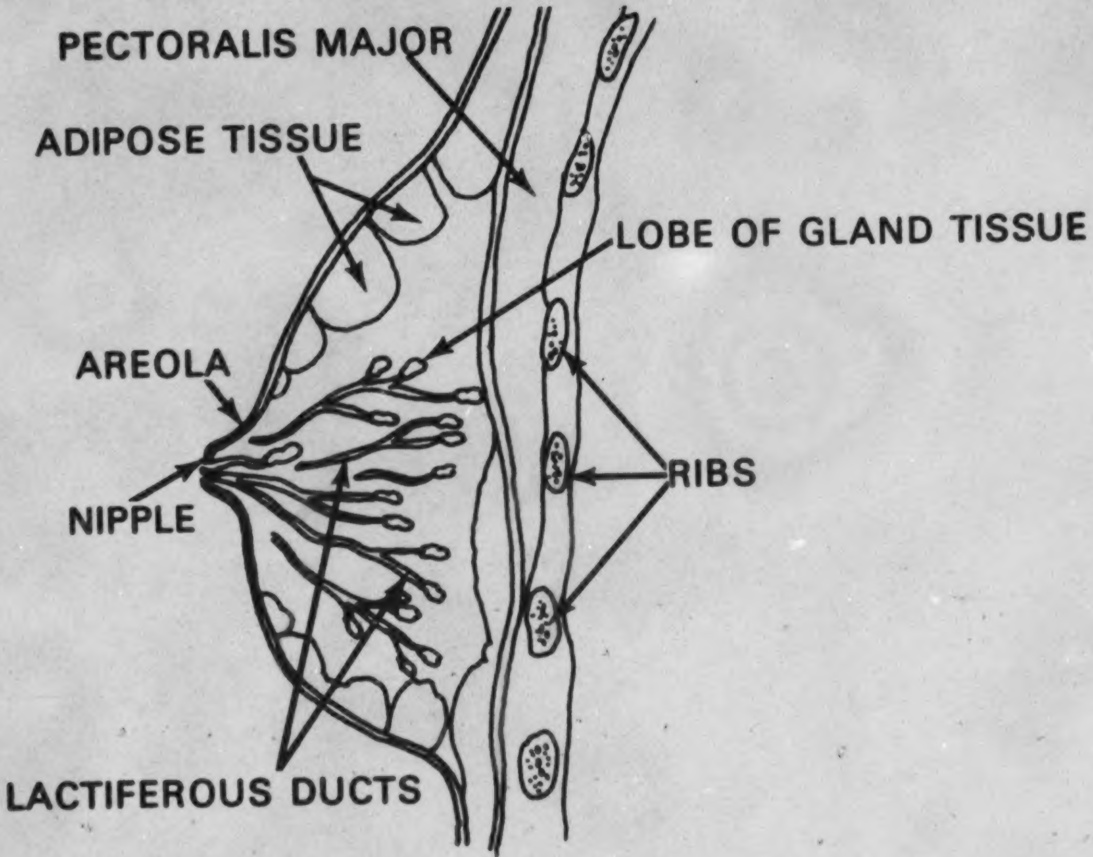

Fallopian Tubes
Ovaries
Uterus
Cervix
Urinary Bladder
Pubic Bone
Vagina
Urethra
Urinary Meatus
Rectum
Vaginal Orifice
Labia Minora
Labia Majora

Female Reproductive System

UTERUS
AND FALLOPIAN TUBES

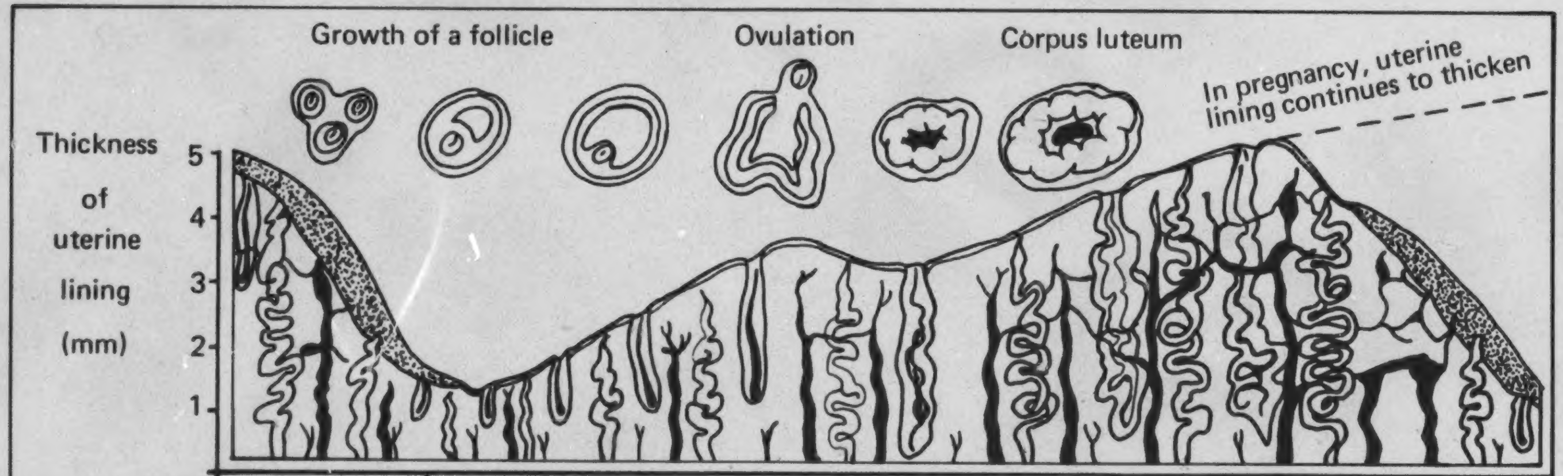

Oviduct
Fundus of Uterus
Ovary
Graafian Follicle
Corpeus Luteum
Maturing Follicle
Body of Uterus
Broad Ligament
Cervix
Vagina
Bartholin's Gland

The Breast


PECTORALIS MAJOR
ADIPOSE TISSUE
LOBE OF GLAND TISSUE
AREOLA
NIPPLE
RIBS
LACTIFEROUS DUCTS

The Menstrual Cycle

•MENSTRUATION•OVULATION


Growth of a follicle
Ovulation
Corpus luteum
In pregnancy, uterine lining continues to thicken
Thickness of uterine lining (mm)
5
4
3
2
1

	Menstruation	Rebuilding of the uterine lining, coiled arteries and glands			Menstruation
Duration days	1 → 5	6 → 14	15 → 20	21 → 28	1 → 5

DAYS INDICATED ARE APPROXIMATE

Used with permission of the Carnation Company from *Pregnancy in Anatomical Illustrations*, copyright 1962, p. 5.

REPRODUCTIVE SYSTEM
UNIT XV

ASSIGNMENT SHEET #1--REACT TO A CURRENT ISSUE DEALING WITH THE REPRODUCTIVE SYSTEM

NAME ______________________________ SCORE ______________

Almost every day some form of media reports on new findings dealing with concerns of the reproductive system. New forms of birth control, issues dealing with abortion, and new research on cancer of this system are only a few of the issues discussed. As a nurse you will frequently be asked questions concerning these issues and should be prepared to react knowledgeably. Keeping current so that you can be up-to-date is very important. Using magazines, newspapers, or pamphlets, find an article that is of interest to you, clip it, and fasten it to this sheet. From this article develop questions that could be asked by a patient. Share this information in a class discussion.

Example: Toxic shock syndrome

Your clipping:

Questions:

____

____

____

____

____

____

____

____

REPRODUCTIVE SYSTEM
UNIT XV

JOB SHEET #1--ASSIST WITH A PELVIC EXAM AND PAP SMEAR

I. Equipment

A. Patient gown

B. Sheet or gown

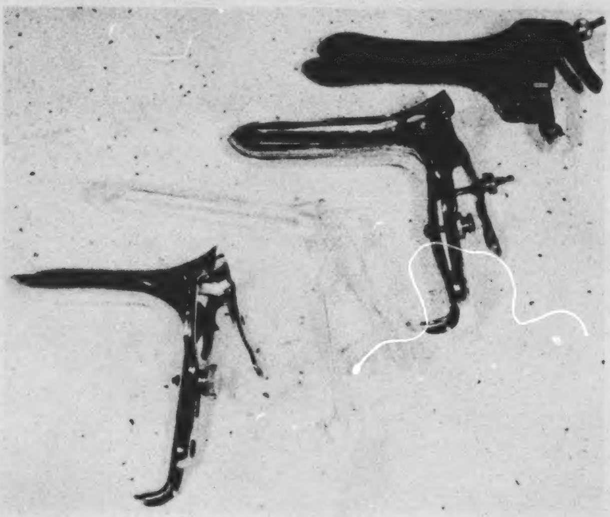
C. Exam light

D. Tray or stand for instruments

E. Speculum (Figure 1)

(NOTE: There are various sizes of metal and plastic speculums available. Please choose the appropriate size for the patient being examined.)

FIGURE 1



F. Sterile exam glove

G. Lubricant

H. Slide (may use two)

(NOTE: Specially marked and packaged slides may be used for this procedure. Become familiar with the type of slides your facility uses.)

JOB SHEET #1

I. Sterile cotton swab

J. Wooden spatula (Figure 2)

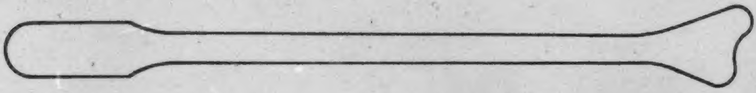


FIGURE 2

K. Spray fixative

II. Procedure

A. Wash hands

B. Set up room and make sure all equipment to be used in exam can be easily reached

(NOTE: Physician will determine what equipment he or she will use for each exam.)

C. Place exam light where it can be easily adjusted

D. Place patient in lithotomy position (Figure 3)

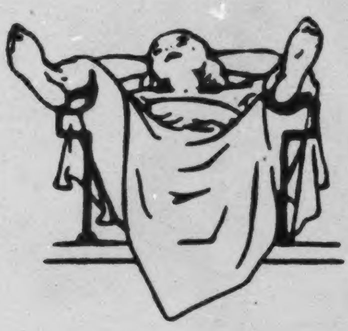


FIGURE 3

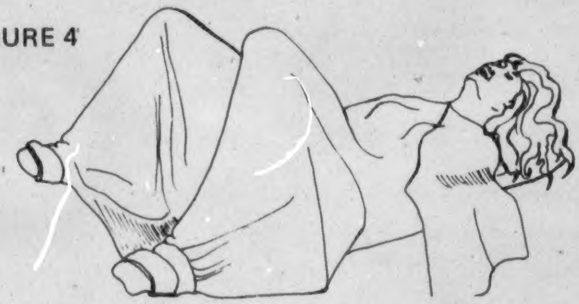
Adapted with permission of Macmillan Publishing Company, Inc., from *Textbook of the Principles and Practices of Nursing*, 5th ed., by Bertha Hammer and Virginia Henderson, copyright 1955, page 563.

JOB SHEET #1

E. Drape patient (Figure 4)

(NOTE: Schedule exam so that the patient will not have to assume this position for a long period of time.)

FIGURE 4



Used with permission of J. B. Lippincott Company from *Introductory Medical-Surgical Nursing*, 2nd ed., by Jeanne Sherar, copyright 1977, page 515.

F. Make sure patient's record or chart is accessible to physician

(NOTE: The pelvic exam procedure will depend on the physician's preference. The usual order includes an examination of the outer genitalia, examination with the speculum and taking the pap smear, manually palpating the organs with a gloved hand, and finally a rectal exam. Be prepared to hand needed equipment as it is called for.)

G. Warm speculum to be used by running warm water over the tips

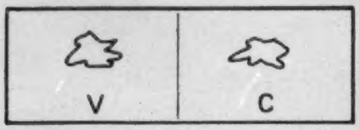
(NOTE: Some facilities will have special warming trays for this purpose.)

H. Follow instructions according to what type of slides will be used for the pap smear

(NOTE: Make sure slides are marked showing whether tissue is taken from vaginal or cervical areas. [Figures 5 and 6].)

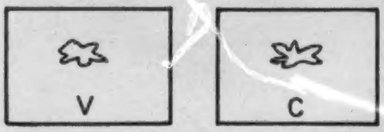
Example:

FIGURE 5



One slide

FIGURE 6



Two slides

I. Spray fixative on slides

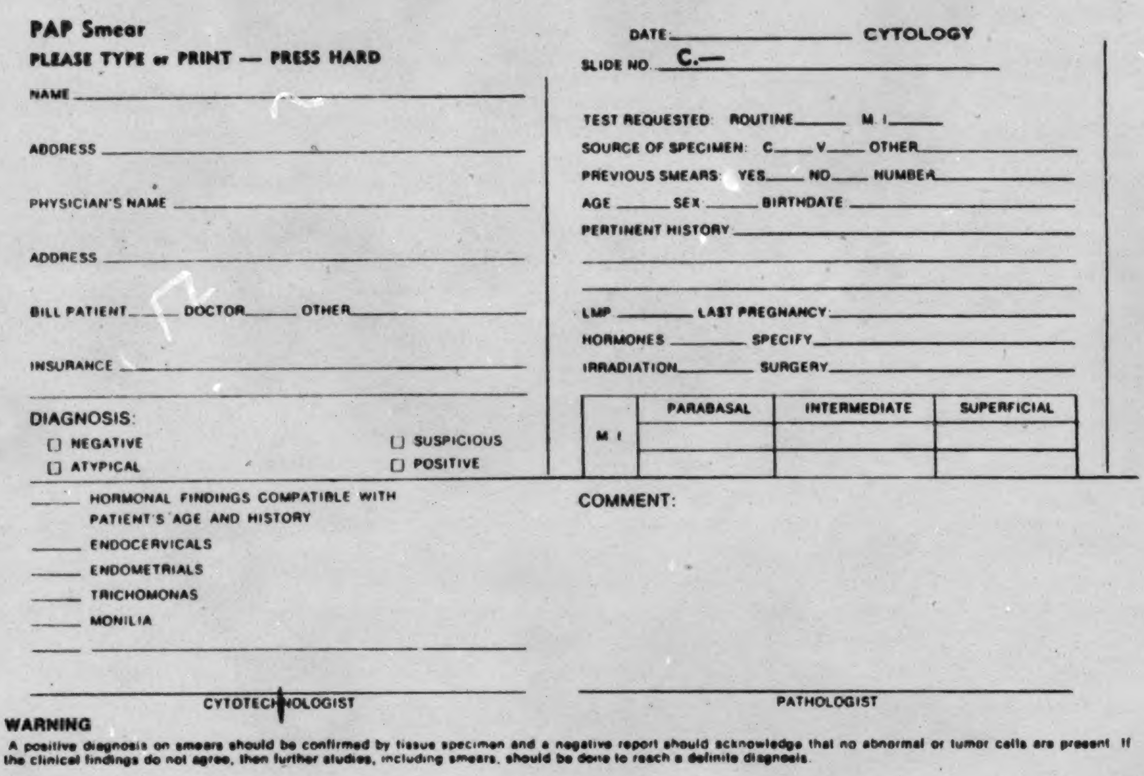
JOB SHEET #1

J. Fill out requisition slip to affix to slides (Figure 7)

(NOTE: There are other diagnostic tests that may be done at this time. If you are aware that these tests will take place, be prepared with equipment and be ready to assist in the procedures.)

Examples: Cervical biopsy, "hanging drop" for monilia smear, GC for gonorrhea

FIGURE 7



PAP Smear

PLEASE TYPE or PRINT — PRESS HARD

NAME ______

ADDRESS ______

PHYSICIAN'S NAME ______

ADDRESS ______

BILL PATIENT ______ DOCTOR ______ OTHER ______

INSURANCE ______

DIAGNOSIS:

☐ NEGATIVE ☐ SUSPICIOUS

☐ ATYPICAL ☐ POSITIVE

DATE ______ CYTOLOGY

SLIDE NO. C.—

TEST REQUESTED: ROUTINE ______ M. I ______

SOURCE OF SPECIMEN: C ______ V ______ OTHER ______

PREVIOUS SMEARS: YES ______ NO ______ NUMBER ______

AGE ______ SEX ______ BIRTHDATE ______

PERTINENT HISTORY ______

LMP ______ LAST PREGNANCY ______

HORMONES ______ SPECIFY ______

IRRADIATION ______ SURGERY ______

	PARABASAL	INTERMEDIATE	SUPERFICIAL
M. I			

______ HORMONAL FINDINGS COMPATIBLE WITH PATIENT'S AGE AND HISTORY

______ ENDOCERVICALS

______ ENDOMETRIALS

______ TRICHOMONAS

______ MONILIA

COMMENT:

CYTOTECHNOLOGIST

PATHOLOGIST

WARNING

A positive diagnosis on smears should be confirmed by tissue specimen and a negative report should acknowledge that no abnormal or tumor cells are present. If the clinical findings do not agree, then further studies, including smears, should be done to reach a definite diagnosis.

JOB SHEET #1

K. Assist with the remainder of pelvic exam

(NOTE: Be prepared to assist physician depending on the routine used. Exam gloves and lubricant will be used to examine internal organs and rectum.)

L. Offer tissues to patient to remove any remaining lubricant

M. Assist patient in returning to room if procedure has been done elsewhere or make comfortable in bed

N. Clean room and remove and cleanse or discard equipment

O. Make sure specimens are correctly labeled and taken to laboratory

P. Wash hands

Q. Record procedure

JOB SHEET #1

III. Checklist for assisting with a pelvic exam and pap smear

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
B. Washed hands correctly	☐	☐
C. Set up room and made sure all equipment to be used in exam could be easily reached	☐	☐
D. Placed exam light where it could be easily adjusted	☐	☐
E. Placed patient in lithotomy position	☐	☐

A. Comments: ____________________

____

____

B. Comments: ____________________

____

____

C. Comments: ____________________

____

____

D. Comments: ____________________

____

____

E. Comments: ____________________

____

____

JOB SHEET #1

Performed well Needs improvement

F. Draped patient ☐ ☐

Comments: ______________________________

____

____

G. Made sure patient's record or chart was accessible to physician ☐ ☐

Comments: ______________________________

____

____

H. Warmed speculum to be used by running warm water over the tips ☐ ☐

Comments: ______________________________

____

____

I. Followed instructions according to what type of slides were used for the pap smear ☐ ☐

Comments: ______________________________

____

____

J. Sprayed fixative on slides ☐ ☐

Comments: ______________________________

____

____

JOB SHEET #1

		Performed well	Needs improvement
K.	Filled out requisition slip to affix to slides	☐	☐
	Comments: ______________________________		
L.	Assisted with the remainder of pelvic exam	☐	☐
	Comments: ______________________________		
M.	Offered tissues to patient to remove any remaining lubricant	☐	☐
	Comments: ______________________________		
N.	Assisted patient in returning to room if procedure was done elsewhere or made comfortable in bed	☐	☐
	Comments: ______________________________		
O.	Cleaned room and removed and cleansed or discarded equipment	☐	☐
	Comments: ______________________________		

JOB SHEET #1

		Performed well	Needs improvement
P.	Made sure specimens were correctly labeled and taken to laboratory	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
Q.	Washed hands	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
R.	Recorded procedure	☐	☐

Comments: ____________________

____

____

REPRODUCTIVE SYSTEM
UNIT XV

JOB SHEET #2--TEACH SELF-EXAMINATION OF BREASTS

It is important for every woman to be familiar with examining her breasts each month. Cancerous tumors that are detected early can be treated with excellent results. The exam should take place during the time immediately after a menstrual period or at a regular time each month, since the breasts usually have some changes in shape and texture immediately before the period, and results can be misleading. Some physicians will include a breast exam as part of the yearly routine pelvic exam and pap smear. Many times the nurse will be asked to teach patients the steps of breast self-exams. Practice examining your own breasts at home, then roleplay teaching your classmates the steps to go through.

I. Equipment

A. Mirror

B. Small pillow or bath towel

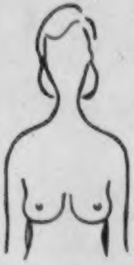
C. Firm bed

II. Procedure

(NOTE: Throughout this procedure you should look for any lumps or thickening of tissue.)

A. Sit or stand in front of the mirror with arms relaxed at sides (Figure 1)

FIGURE 1



Used with permission of the American Cancer Society.

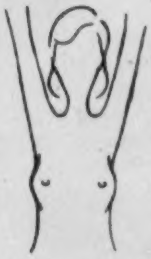
B. Look carefully at breasts to see any change in size or shape

(NOTE: Be aware of any puckering or dimpling of tissue and any discharge that may come from the nipples or retraction of the nipples.)

JOB SHEET #2

C. Raise both arms over your head and look again for the same characteristics (Figure 2)

FIGURE 2



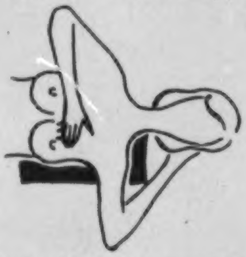
Used with permission of the American Cancer Society.

D. Lie down on the bed with a pillow or rolled bath towel under the left shoulder and put the left hand under your head

E. Press with the fingers of your right hand held together flat, gently but firmly with circular motions, to feel the inner, upper quarter of your left breast beginning at the breastbone, and going out toward the nipple line (Figure 3)

(NOTE: Also feel the area around the nipple.)

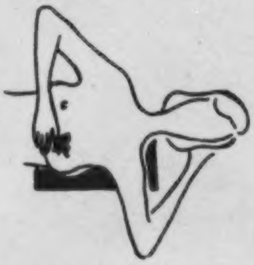
FIGURE 3



Used with permission of the American Cancer Society.

F. Feel the lower inner part of the breast next and do not be alarmed if you do feel a ridge of firm tissue, this is normal (Figure 4)

FIGURE 4



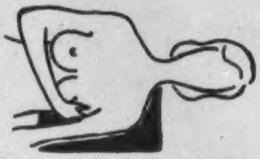
Used with permission of the American Cancer Society.

JOB SHEET #2

G. Remove your hand from beneath your head and bring it down to your side

H. Using the flat of your hand, feel under your armpits (Figure 5)

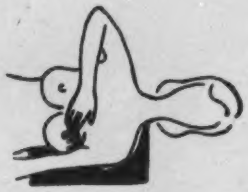
FIGURE 5



Used with permission of the American Cancer Society.

I. Continue to use the same motions to feel the upper, outer quarter of the breast from the nipple line to where the arm is resting (Figure 6)

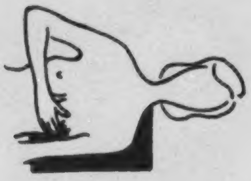
FIGURE 6



Used with permission of the American Cancer Society.

J. Feel the lower outer section of the breast going from the outer part to the nipple (Figure 7)

FIGURE 7

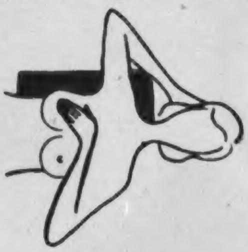


Used with permission of the American Cancer Society.

JOB SHEET #2

K. Repeat the procedure for the right breast (Figure 8)

FIGURE 8



Used with permission of the American Cancer Society.

(NOTE: Most women are very conscious of their breasts and can detect if there are any changes in the tissue when they shower or bathe. It is still a good idea to perform an extensive exam each month.)

JOB SHEET #2

III. Checklist for teaching self-examination of breasts

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
B. Sat or stood in front of the mirror with arms relaxed at sides	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
C. Looked carefully at breasts to see any change in size or shape	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
D. Raised both arms over head and looked again for the same characteristics	☐	☐

Comments: ____________________

____

____

	Performed well	Needs improvement
E. Lay down on the bed with a pillow or rolled bath towel under left shoulder and put left hand under head	☐	☐

Comments: ____________________

____

____

1662-C

JOB SHEET #2

		Performed well	Needs improvement
F.	Pressed with the fingers of right hand held together flat, gently but firmly with circular motions, and felt the inner, upper quarter of left breast beginning at the breastbone, and going out toward the nipple line	☐	☐

Comments: ____

____

____

		Performed well	Needs improvement
G.	Felt the lower inner part of the breast next and was not alarmed if a ridge of firm tissue was felt	☐	☐

Comments: ____

____

____

		Performed well	Needs improvement
H.	Removed hand from beneath head and brought it down to side	☐	☐

Comments: ____

____

____

		Performed well	Needs improvement
I.	Used the flat of hand, felt under armpits	☐	☐

Comments: ____

____

____

JOB SHEET #2

		Performed well	Needs improvement
J.	Continued to use the same motions and felt the upper, outer quarter of the breast from the nipple line to where the arm rested	☐	☐

Comments: ______________________________

____

____

K.	Felt the lower outer section of breast going from outer part to the nipple	☐	☐

Comments: ______________________________

____

____

L.	Repeated the procedure for the right breast	☐	☐

Comments: ______________________________

____

____

REPRODUCTIVE SYSTEM
UNIT XV

JOB SHEET #3--GIVE A VAGINAL DOUCHE

I. Equipment

A. Bedpan

B. Douche bag with tubing and clamp

C. Bathroom tissue

D. Clean gloves

E. Intravenous stand (portable is preferred)

F. Graduate container

G. Bath thermometer

H. Bed protector

I. Bath blanket

J. Prescribed solution

Example: One ounce of Betadine to one liter of water

II. Procedure

(NOTE: Douches are more effective when the patient is in a supine position rather than a sitting position.)

A. Check physician's order

B. Wash hands

C. Collect equipment

D. Identify patient and explain procedure

E. Provide privacy for patient

F. Place equipment in accessible area

G. Spread bath blanket over patient as top covers are fanfolded to the foot of the bed

H. Elevate bed unless contraindicated

I. Put the IV pole in place

(NOTE: Top should be one and one-half feet above hip area.)

JOB SHEET #3

J. Offer bedpan; have patient void

K. Take douche bag with appropriate solution into bathroom

(NOTE: Solution should be 105°-110°F (73°-78°C). Measure and check temperature in the graduate container. Avoid touching the sides of the douche bag or tubing against you or the side of the sink.)

L. Turn clamp of douche bag to off position

M. Fill douche bag with solution in graduate container

N. Close top of douche bag

O. Hang bag on IV standard

(**CAUTION**: Do not let tubing drag on floor or over bed. Keep the tubing in your hand or hang over the IV standard.)

P. Apply bed protector under patient's hips

Q. Position patient in a dorsal recumbent with legs flexed and knees apart

R. Apply clean glove(s)

S. Hold tip of tubing in dominant hand and run a small amount of the solution through, catching it in bedpan

(**CAUTION**: Test temperature by running a small amount of solution on upper, inner area of thigh that is over bedpan. The solution may be too hot for the patient even at the prescribed temperature.)

T. Place clamp where the other hand may control it easily while the dominant hand directs the tubing tip

U. Separate the perineal tissues and insert the douche tip two-three inches (five-7.5 cm) into vagina in a backward direction

(**CAUTION**: Use a slow, gentle motion as you ease the tip into the vagina.)

V. Unclamp the tubing and let the solution slowly enter the vagina

W. Clamp douche tubing when nearly all the solution from the bag is emptied and remove tip; place on clean paper towel

X. Place patient in high Fowler's position

(NOTE: If patient can tolerate this position on the bedpan, leave for five-10 minutes for flow return. Make sure that patient has communication device nearby.)

JOB SHEET #3

Y. Remove bedpan; make patient comfortable by patting area dry with tissues or towel, replacing bed covers, and returning head of bed to comfortable position

Z. Remove all equipment and clean as indicated

(NOTE: Douche bag and tubing can be rinsed out with cold water, dried, and returned to patient's storage area.)

AA. Record procedure in chart, giving time, patient reaction, and observation of fluid return

PN I - 1669-C

JOB SHEET #3

III. Checklist for giving a vaginal douche

Performed well | Needs improvement

A. Gathered necessary equipment ☐ ☐

Comments: ______________________________

B. Checked physician's order ☐ ☐

Comments: ______________________________

C. Washed hands; collected equipment ☐ ☐

Comments: ______________________________

D. Identified patient and explained procedure ☐ ☐

Comments: ______________________________

E. Provided privacy for patient ☐ ☐

Comments: ______________________________

F. Placed equipment in accessible area ☐ ☐

Comments: ______________________________

1670-C

JOB SHEET #3

Performed well — Needs improvement

G. Spread bath blanket over patient and fanfolded top covers to foot of bed ☐ ☐

Comments: ______________________________

____

____

H. Elevated bed unless contraindicated ☐ ☐

Comments: ______________________________

____

____

I. Put the IV pole in place ☐ ☐

Comments: ______________________________

____

____

J. Offered bedpan; had patient void ☐ ☐

Comments: ______________________________

____

____

K. Took douche bag with appropriate solution into bathroom ☐ ☐

Comments: ______________________________

____

____

PN I - 1671-C

JOB SHEET #3

		Performed well	Needs improvement
L.	Turned clamp of douche bag to off position	☐	☐
	Comments:		
M.	Filled douche bag with solution in graduate container	☐	☐
	Comments:		
N.	Closed top of douche bag	☐	☐
	Comments:		
O.	Hung bag on IV standard	☐	☐
	Comments:		
P.	Applied bed protector under patient's hips	☐	☐
	Comments:		
Q.	Positioned patient in a dorsal recumbent with legs flexed and knees apart	☐	☐
	Comments:		

JOB SHEET #3

		Performed well	Needs improvement
R.	Applied clean glove(s)	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
S.	Held tip of tubing in dominant hand and ran a small amount of the solution through, catching it in bedpan	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
T.	Placed clamp where the other hand controlled it easily while the dominant hand directed the tubing tip	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
U.	Separated the perineal tissues and inserted the douche tip two-three inches (five-7.5 cm) into vagina in a backward direction	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
V.	Unclamped the tubing and let the solution slowly enter the vagina	☐	☐

Comments: ____________________

____

____

JOB SHEET #3

		Performed well	Needs improvement
W.	Clamped douche tubing when nearly all the solution from the bag was emptied and removed tip; placed on clean paper towel	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
X.	Placed patient in high Fowlers's position	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
Y.	Removed bedpan; made patient comfortable by patting area dry with tissues or towel, replaced bed covers, and returned head of bed to comfortable position	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
Z.	Removed all equipment and cleaned as indicated	☐	☐

Comments: ____________________

____

____

		Performed well	Needs improvement
AA.	Recorded procedure in chart, giving time, patient reaction, and observation of fluid return	☐	☐

Comments: ____________________

____

____

REPRODUCTIVE SYSTEM
UNIT XV

JOB SHEET #4--GIVE PERINEAL CARE

I. Equipment

  A. Clean graduate containers or peri-bottles

  B. Solution (105°F, 41°C)

  (NOTE: The solution will probably be ordered by the physician or it could be a standing order from the hospital.)

  C. Washcloths and towels

  D. Bedpan and cover

  E. Plastic bag for waste disposal

  F. Toilet tissue

  G. Bed protector (disposable)

  H. Clean gloves

  I. Bath blanket

II. Procedure for female perineal care

  A. Check with physician's orders if care includes a specific medication or solution

  B. Wash hands

  C. Obtain needed equipment and take to bedside

  D. Identify patient and explain procedure

  E. Provide privacy for patient

  F. Lower head of bed but raise bed level to nurse's working level

  G. Drape patient with bath blanket

  H. Place bed protector under patient's hips

  I. Place patient on bedpan

  (NOTE: Patient may need to void or defecate at this time. If so, then empty and clean bedpan and replace patient on the clean bedpan.)

JOB SHEET #4

J. Wash hands

K. Prepare solution or use pre-mixed solution as ordered

(NOTE: You will need to put your cleansing solution in one container and the rinsing solution in the other or use peri-bottle for solutions.)

L. Apply clean gloves

M. Cleanse perineal area

(NOTE: If drainage is heavy or if the patient has had a bowel movement, clean area with tissues first, then use a warm, wet washcloth. Be sure to cleanse from the front to the back.)

N. Cleanse genitalia with clean washcloth or appropriate material moistened with solution, always using downward strokes

(NOTE: Separate labia for more thorough cleansing if condition permits.)

O. Rinse area thoroughly with rinsing solution

P. Pat area dry with towels

Q. Remove bedpan, cover, and bed protector, and discard contents

R. Turn patient on side; assisting as needed

S. Cleanse lower perineal area and discard tissues

T. Rinse area using tissue moistened with clear water

U. Pat area dry

V. Turn patient onto back

W. Remove bath blanket and make patient comfortable

X. Remove equipment from room, clean, and replace

Y. Wash hands

Z. Record procedure, time, condition of the perineum, and any drainage

III. Procedure for male perineal care

(NOTE: Steps A-H of Section II may be followed to begin perineal care for the male.)

JOB SHEET #4

I. Offer urinal and/or bedpan

J. Wash hands

K. Apply clean gloves

L. Drape area to be cleansed by placing one end of towel snugly between patient's legs; arrange bath blanket so that only the area to be cleansed is exposed

M. Cleanse penis by washing the shaft from the meatus towards the mons pubis

(NOTE: If male is uncircumcised, be sure to gently retract foreskin and thoroughly cleanse around the glans penis.)

N. Cleanse scrotal area by grasping the scrotum gently with thumb and index fingers and moving upward toward the mons pubis

O. Rinse area with clean solution

P. Dry area gently, making sure that all creases are dried

Q. Remove bed protector, towel, and bath blanket; replace top linens

R. Make patient comfortable

S. Clean all supplies and return them to the storage area

T. Wash hands

U. Record procedure, time, reaction of patient, and any observations of organs or discharge

JOB SHEET #4

IV. Checklist for giving female perineal care

	Performed well	Needs improvement
A. Gathered necessary equipment	☐	☐
Comments:		
B. Checked with physician's orders if care included a specific medication or solution	☐	☐
Comments:		
C. Washed hands; obtained needed equipment and took to bedside	☐	☐
Comments:		
D. Identified patient and explained procedure	☐	☐
Comments:		
E. Provided privacy for patient	☐	☐
Comments:		

JOB SHEET #4

		Performed well	Needs improvement
F.	Lowered head of bed but raised bed level to nurse's working level	☐	☐
	Comments: ________________		
G.	Draped patient with bath blanket	☐	☐
	Comments: ________________		
H.	Placed bed protector under patient's hips	☐	☐
	Comments: ________________		
I.	Placed patient on bedpan	☐	☐
	Comments: ________________		
J.	Washed hands	☐	☐
	Comments: ________________		
K.	Prepared solution or used pre-mixed solution as ordered	☐	☐
	Comments: ________________		

JOB SHEET #4

		Performed well	Needs improvement
L.	Applied clean gloves	☐	☐
	Comments: ____________________		
M.	Cleansed perineal area	☐	☐
	Comments: ____________________		
N.	Cleansed genitalia with clean washcloth or appropriate material moistened with solution; used downward strokes	☐	☐
	Comments: ____________________		
O.	Rinsed area thoroughly with rinsing solution	☐	☐
	Comments: ____________________		
P.	Patted area dry with towels	☐	☐
	Comments: ____________________		
Q.	Removed bedpan, cover, and bed protector, and discarded contents	☐	☐
	Comments: ____________________		

JOB SHEET #4

		Performed well	Needs improvement
R.	Turned patient on side, assisting as needed	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
S.	Cleansed lower perineal area and discarded tissues	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
T.	Rinsed area using tissue moistened with clear water	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
U.	Patted area dry	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
V.	Turned patient onto back	☐	☐

Comments: ______________________________

____

____

		Performed well	Needs improvement
W.	Removed bath blanket and made patient comfortable	☐	☐

Comments: ______________________________

____

____

JOB SHEET #4

	Performed well	Needs improvement
X. Removed equipment from room, cleaned, and replaced	☐	☐

Comments: ____________________

	Performed well	Needs improvement
Y. Washed hands	☐	☐

Comments: ____________________

	Performed well	Needs improvement
Z. Recorded procedure, time, condition of the perineum, and any drainage	☐	☐

Comments: ____________________

V. Checklist for giving male perineal care

	Performed well	Needs improvement
A. Followed correctly steps A-H of Section II to begin perineal care for male	☐	☐

Comments: ____________________

	Performed well	Needs improvement
B. Offered urinal and/or bedpan	☐	☐

Comments: ____________________

JOB SHEET #4

		Performed well	Needs improvement
C.	Washed hands	☐	☐
	Comments: ____________________		
D.	Applied clean gloves	☐	☐
	Comments: ____________________		
E.	Draped area to be cleansed and placed one end of towel snugly between patient's legs; arranged bath blanket so that only the area to be cleansed was exposed	☐	☐
	Comments: ____________________		
F.	Cleansed penis by washing the shaft from the meatus toward the mons pubis	☐	☐
	Comments: ____________________		
G.	Cleansed scrotal area by grasping the scrotum gently with thumb and index fingers and moving upward toward the mons pubis	☐	☐
	Comments: ____________________		

JOB SHEET #4

		Performed well	Needs improvement
H.	Rinsed area with clean solution	☐	☐
	Comments: ____________________ ____________________ ____________________		
I.	Dried area gently and made sure that all creases were dried	☐	☐
	Comments: ____________________ ____________________ ____________________		
J.	Removed bed protector, towel, and bath blanket; replaced top linens	☐	☐
	Comments: ____________________ ____________________ ____________________		
K.	Made patient comfortable	☐	☐
	Comments: ____________________ ____________________ ____________________		
L.	Cleaned all supplies and returned them to the storage area	☐	☐
	Comments: ____________________ ____________________ ____________________		
M.	Washed hands	☐	☐
	Comments: ____________________ ____________________ ____________________		

JOB SHEET #4

	Performed well	Needs improvement
N. Recorded procedure, time, reaction of patient, and any observations of organs or discharge	☐	☐

Comments: ______________________________

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REPRODUCTIVE SYSTEM
UNIT XV

TEST

NAME ______________________________ SCORE ______________

1. Match terms associated with the reproductive system to the correct definitions. Write the correct numbers in the blanks.

_____a. Capable of maintaining an independent existence

_____b. Surgical removal of the prepuce

_____c. Period at which one becomes capable of reproduction

_____d. Thick, white secretion of the male reproductive glands

_____e. Study of diseases of the female reproductive system

_____f. Ducts that convey milk

_____g. Male reproductive cell

_____h. Fold of peritoneum that supports the uterus

_____i. Process by which a living organism produces a new individual of the same kind

_____j. External female genitalia

_____k. Cord suspending the testes; composed of veins, arteries, lymphatics, nerves, and vas deferens

_____l. Periodic discharge of blood and tissues from the non-pregnant uterus

_____m. Period that marks the cessation of the reproductive function in the female or diminishing testicular activity in the male

_____n. Area between external genitalia and anus

_____o. Process by which the sperm unites with the ovum

1. Broad ligament
2. Circumcision
3. Climacteric
4. Puberty
5. Spermatic cord
6. Perineum
7. Semen
8. Gynecology
9. Lactiferous ducts
10. Reproduction
11. Menstruation
12. Vulva
13. Viable
14. Spermatozoa
15. Fertilization

______p. External pouch which contains the testes

______q. Beginning of menstruation

______r. Female reproductive cell

______s. Embryonic sex gland before differentiation into definitive testis or ovary

______t. Normal condition when the production of the ovum ceases that results in permanent cessation of menstrual activity

______u. Thick, sticky

______v. Pertaining to the os pubis, the anterior bone of the pelvis

______w. Mucous membrane lining of the uterus

______x. Head of penis

______y. Branch of medicine that deals with management of pregnancy, labor, and delivery and post-partum

______z. Thin-walled cavity in the ovary enclosing a developing ovum

______aa. Foreskin or fold of skin over the glans penis in the male

16. Endometrium
17. Pubic
18. Menarche
19. Scrotum
20. Graafian follicle
21. Glans penis
22. Gonad
23. Ovum
24. Viscid
25. Obstetrics
26. Menopause
27. Prepuce

2. Name functions of the male and female reproductive systems.

a. ____

b. ____

c. ____

3. Describe secondary sex characteristics in males and females.

a. Males-- ______________________________________

____

____

____

____

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____

b. Females– ____

____

____

____

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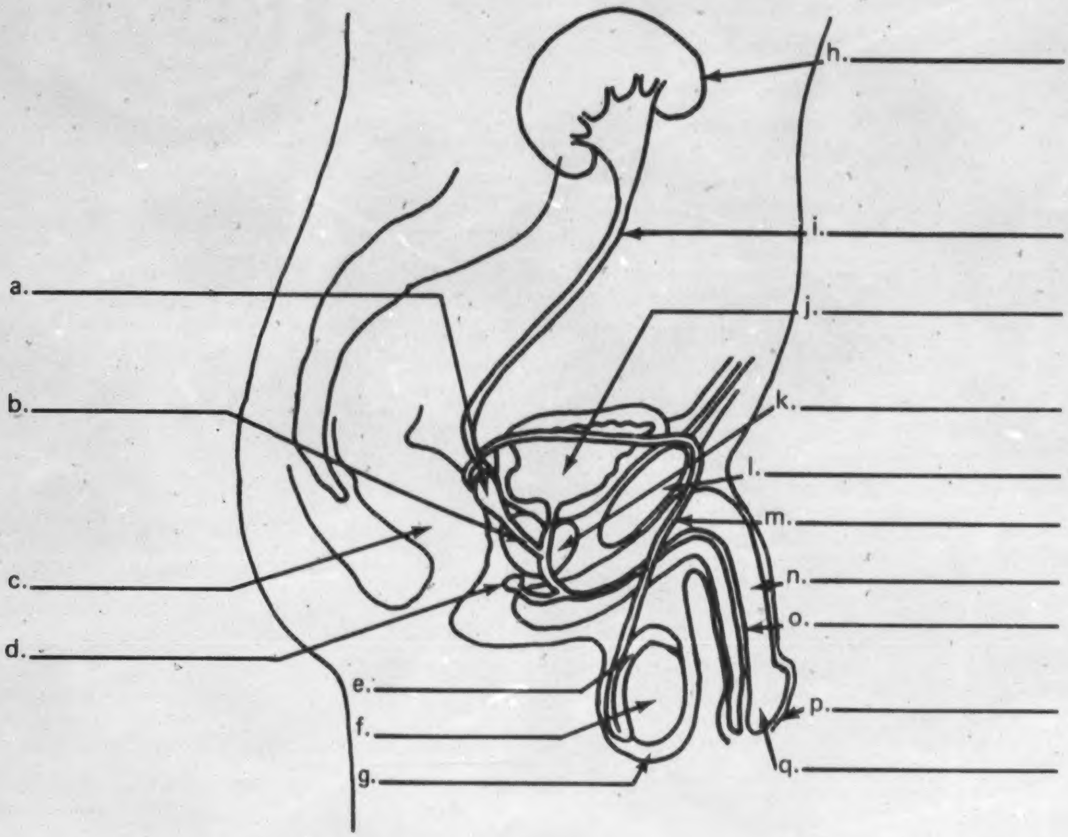
____

4. Identify parts of the male reproductive system and adjacent structures.


a. ____________
b. ____________
c. ____________
d. ____________
e. ____________
f. ____________
g. ____________
h. ____________
i. ____________
j. ____________
k. ____________
l. ____________
m. ____________
n. ____________
o. ____________
p. ____________
q. ____________

5. Match male external and internal reproductive organs to the correct functions. Write the correct number in the blanks. Some answers may be used more than once.

External male organs

______a. Transports sperm from the testes to the urethra

______b. Produce sperm and testosterone

______c. Protects testes; regulates and maintains favorable temperature for sperm production

______d. Collects and stores sperm while maturing; conducts sperm to outside

______e. Carry semen into vagina during copulation; carry urine from bladder

1. Scrotum
2. Testes
3. Epididymis
4. Vas deferens
5. Penis and urethra

Internal male organs

______f. Secrete viscid alkaline fluid which removes urine residue; secrete mucus for lubrication

______g. Secretes alkaline fluids which enhance sperm mobility; contracts smooth muscles to aid in ejaculation

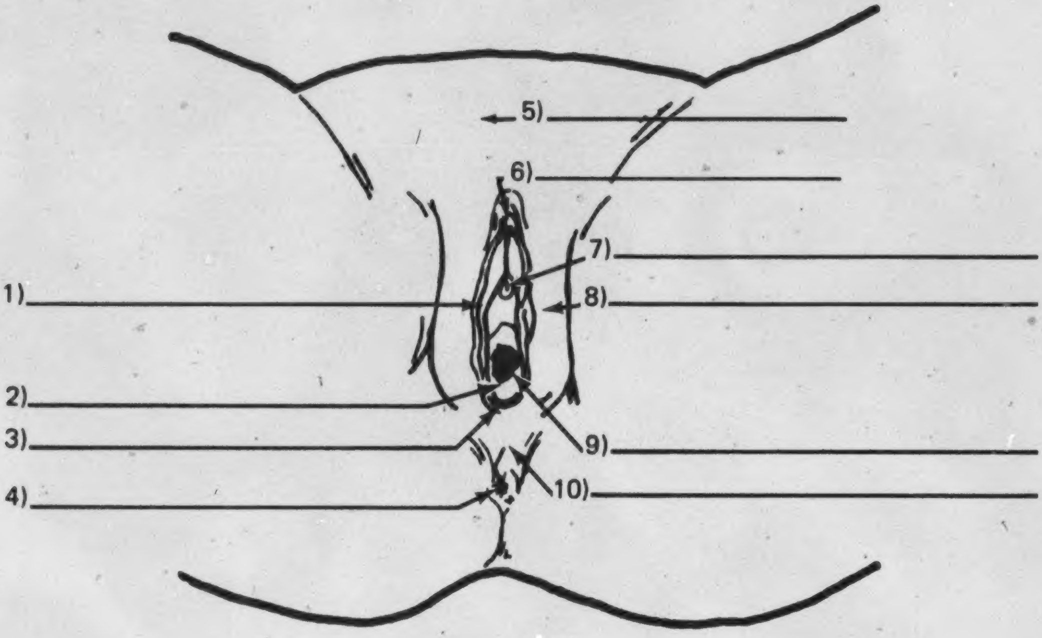
______h. Transports sperm from the testes to the urethra

______i. Contribute essential components to semen

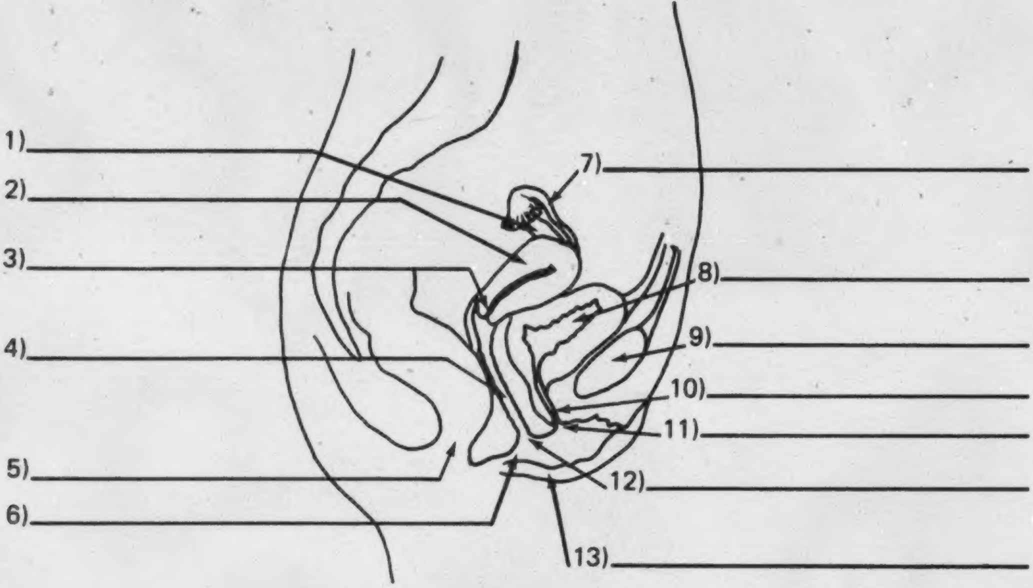
6. Seminal vesicles
7. Prostate gland
8. Bulbourethral or Cowper's glands
9. Vas deferens

6. Identify parts of the female reproductive system and adjacent structures.

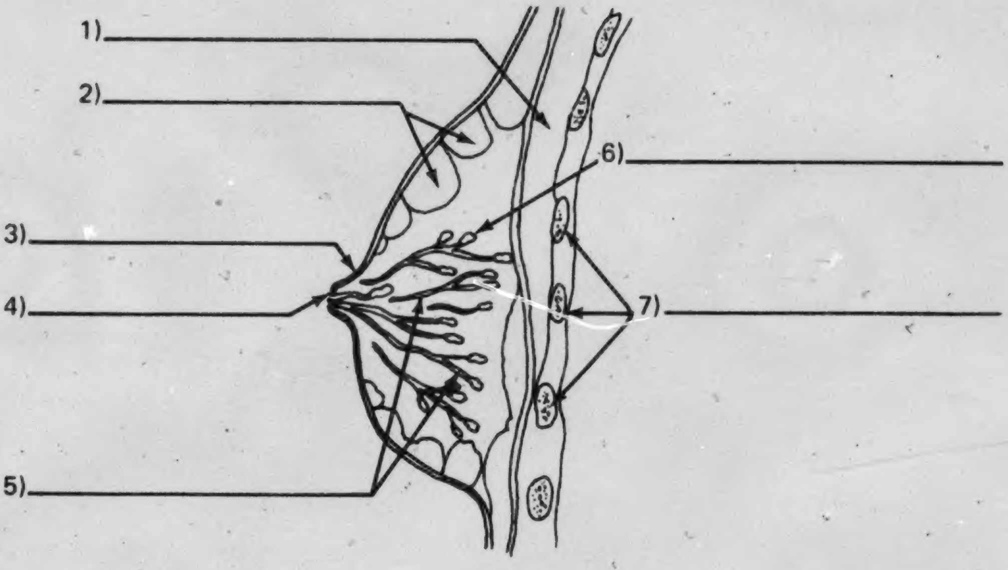
a. External organs and adjacent structures


5)
6)
7)
1)
8)
2)
3)
9)
4)
10)

b. Internal organs and adjacent structures


1)
7)
2)
3)
8)
9)
4)
10)
11)
5)
12)
6)
13)

c. Breast



7. Match female external and internal reproductive organs to the correct functions. Write the correct numbers in the blanks.

External female organs

______a. Enclosing of the vestibule

______b. Opening of vagina

______c. Pelvic floor

______d. Lactation (secretion of milk)

______e. Sexual excitation

______f. Surrounding of labia minora

______g. Regulation of urine flow

______h. Protection of pubic bone

1. Mammary glands (breasts)
2. Mons pubis
3. Labia majora
4. Labia minora
5. Clitoris
6. Urethral orifice
7. Vaginal orifice
8. Perineum

Internal female organs

_____i. Movement of ova from ovaries to uterus; fertilization usually takes place in the distal third of the tube

_____j. Secretion of lubricating fluid

_____k. Reception of the penis during copulation; passageway for the infant during birth

_____l. Production of hormones and an ovum, usually once a month from alternate ovary

_____m. Menstruation; during pregnancy, protection and nourishment of fertilized ovum until it becomes a viable infant

9. Vagina
10. Uterus
11. Fallopian tubes (two)
12. Ovaries (two)
13. Bartholin's and Skene's glands

8. Match stages of the 28-day menstrual cycle to the correct descriptions. Write the correct numbers in the blanks.

_____a. During this period of ovum maturation, the Graafian follicle produces estrogen under the control of the pituitary gland and the endometrium repairs and begins to thicken

_____b. Hormone production decreases; endometrium shrinks

_____c. Ovulation occurs; Graffian follicle ruptures, and ovum is released into the abdominal cavity; fringed end of fallopian tube brings ovum into tube where it is propelled to uterus

_____d. Usually menstruation occurs, and one of the many ova enclosed in a Graafian follicle begins to mature

_____e. Corpus luteum forms, secreting progesterone; endometrium thickens

1. Days one--five
2. Days five-13
3. By day 14
4. Days 15-20
5. Days 21-28

9. Match common problems that can occur in menstruation to the correct definitions. Write the correct numbers in the blanks.

_____a. Excessive bleeding at the time of a menstrual period, either in number of days of flow or the amount of blood, or both

_____b. Painful or difficult menstruation

_____c. Bleeding from the uterus, especially at times other than during the menstrual period

_____d. Absence or suppression of menstruation

1. Metrorrhagia
2. Amenorrhea
3. Dysmenorrhea
4. Menorrhagia

10. Describe physiological changes that occur during menopause.

a.

b.

11. Complete the following chart on advantages, disadvantages, and effectiveness of types of birth control.

TYPE	ADVANTAGES	DISADVANTAGES	EFFECTIVENESS
Pill	a. ____________ ____________ ____________ ____________	May cause nausea, weight gain, breakthrough bleeding; increased incidence of vascular disease	Approximately 95%
Diaphragm with spermicidal preparation	Not a systemic drug; no physical risks	b. ____________ ____________ ____________ ____________ ____________ ____________ ____________	95% if used correctly with spermicidal preparation
Foam	No prescription needed; easy to insert; no physical risk unless allergic to chemical	Must be scrupulous in cleaning applicator; must be inserted each time before intercourse	c. ____________ ____________ ____________ ____________
Vaginal suppositories	d. ____________ ____________ ____________ ____________ ____________	Must be inserted each time before intercourse; must comply with time limits to allow suppository to dissolve and the amount of time spermicide lasts	If used with a condom, 95%; without condom, 85-90%

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TYPE	ADVANTAGES	DISADVANTAGES	EFFECTIVENESS
Condom	No prescription needed; no physical risks; reduces chance of contracting venereal disease	e. ________	95%
IUD (Intra-uterine device)	Does not need to be inserted each time	f. ________	95-97%
Rhythm	g. ________	Period of ovulation is not dependable	60-80%
Withdrawal	No prescription needed; no physical risks	Unreliable because depends on man taking responsibility not to ejaculate in vagina or near pubis or thighs; may be physically and emotionally unsatisfying	h. ________
Tubal ligation	Is considered permanent	i. ________	99%
Vasectomy	Is considered permanent	Surgical procedure, but can be done under local anesthesia; may have some discomfort and swelling	j. ________

12. List reasons for vaginal douches and perineal care.

    a. Vaginal douches

        1. ______________________________

        2. ______________________________

        3. ______________________________

        4. ______________________________

    b. Perineal care

        1. ______________________________

        2. ______________________________

        3. ______________________________

        4. ______________________________

13. React to a current issue dealing with the reproductive system.

14. Demonstrate the ability to:

    a. Assist with a pelvic exam and pap smear.

    b. Teach self-examination of breasts.

    c. Give a vaginal douche.

    d. Give perineal care.

    (NOTE: If activities 13 and 14 have not been finished before the test, ask your instructor when they should be completed.)

REPRODUCTIVE SYSTEM
UNIT XV

ANSWERS TO TEST

1. a. 13
    - b. 2
    - c. 4
    - d. 7
    - e. 8
    - f. 9
    - g. 14
    - h. 1
    - i. 10
    - j. 12
    - k. 5
    - l. 11
    - m. 3
    - n. 6
    - o. 15
    - p. 19
    - q. 18
    - r. 23
    - s. 22
    - t. 26
    - u. 24
    - v. 17
    - w. 16
    - x. 21
    - y. 25
    - z. 20
    - aa. 27
2. a. Perpetuation of the human species
    - b. Sexual gratification
    - c. Secretion of hormones
3. Description should include:
    - a. Males
        - 1) Characteristics appear at puberty, approximately 12-14 years of age
        - 2) Change in musculoskeletal development with broader shoulders, narrow hips, and firmer muscles
        - 3) Increase in activity of sudoriferous and sebaceous glands
        - 4) Growth of beard, pubic, and axillary hair with general increase of hair growth all over body
        - 5) Change in voice to deeper tones

b. Females

1) Characteristics appear at puberty, approximately 10-12 years of age

2) Enlargement of breasts

3) Appearance of pubic and axillary hair

4) Menarche

5) Changes in body contours due to increase in growth and fatty deposits

4. a. Seminal vesicule

b. Ejaculatory duct

c. Rectum

d. Bulbourethral glands

e. Epididymis

f. Testis

g. Scrotum

h. Kidney

i. Ureter

j. Urinary bladder

k. Prostate gland

l. Pubic bone

m. Vas deferens

n. Penis

o. Urethra

p. Prepuce

q. Glans penis

5. External male organs

a. 4

b. 2

c. 1

d. 3

e. 5

Internal male organs

f. 8

g. 7

h. 4

i. 6

6. a. External organs and adjacent structures

   1) Labia minora
   2) Hymen
   3) Vestibule
   4) Anus
   5) Mons pubis
   6) Clitoris
   7) Urinary meatus
   8) Labia majora
   9) Vaginal orifice
   10) Perineum

   b. Internal organs and adjacent structures

   1) Ovaries (two)
   2) Uterus
   3) Cervix
   4) Vagina
   5) Rectum
   6) Labia minora
   7) Fallopian tubes (two)
   8) Urinary bladder
   9) Pubic bone
   10) Urethra
   11) Urinary meatus
   12) Vaginal orifice
   13) Labia majora

c. Breast

1) Pectoralis major

2) Adipose tissue

3) Areola

4) Nipple

5) Lactiferous ducts

6) Lobe of gland tissue

7) Ribs

7. External female organs

a. 4

b. 7

c. 8

d. 1

e. 5

f. 3

g. 6

h. 2

Internal female organs

i. 11

j. 13

k. 9

l. 12

m. 10

8. a. 2

b. 5

c. 3

d. 1

e. 4

9. a. 4

   b. 3

   c. 1

   d. 2

10. a. Production of estrogen diminishes when ovaries become scar tissue as they atrophy

    b. Atrophy of the uterus, fallopian tubes, vagina, and vulva occurs because of lack of estrogen

11. a. Easy to take; periods usually shorter with less flow

    b. Must be fitted by a doctor and checked periodically; must be inserted each time before intercourse and left in six-eight hours afterward; must be scrupulous in cleaning and storing

    c. If used with a condom, 95%; without condom, 70-85%

    d. No prescription needed; easy to insert; no physical risk unless allergic to chemical

    e. Male must take responsibility; lack of sensitivity; must be used before intercourse

    f. Has to be inserted by physician and checked periodically; infections frequently occur; causes cramping and bleeding in some women; may cause perforation of uterus

    g. No prescription needed; no physical risks

    h. 10-15%

    i. Surgical procedure under general anesthesia, with post-operative discomforts; permanent sterilization

    j. 99%

12. a. Vaginal douches

    1) Promote cleanliness

    2) Promote circulation to perineal areas

    3) Prevent cross-contamination during a surgical procedure

    4) Soothe inflamed tissues using medication or other solutions

b. Perineal care

1) Helps prevent infections

2) Promotes healing of the perineal area, if affected

3) Prevents breakdown of irritated tissue in the perineal area

4) Aids in prevention of odors

13. Evaluated to the satisfaction of the instructor

14. Performance skills evaluated to the satisfaction of the instructor